SERVICE MANUAL

RA-1 CHASSIS

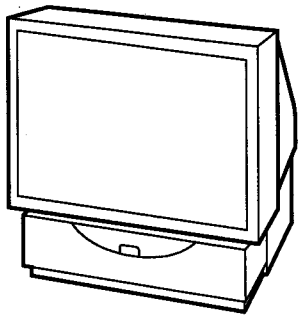
MODEL	COMMANDER	DEST.	CHASSIS NO.
KP-41T15	RM-Y118	US	SCC-H53A-A
KP-41T15	RM-Y118	CND	SCC-H58A-A
KP-46S15	RM-Y118	US	SCC-H53B-A
KP-46S15	RM-Y118	CND	SCC-H58B-A
KP-53S15	RM-Y118	US	SCC-H53C-A
KP-53S15	RM-Y118	CND	SCC-H58C-A

Note :

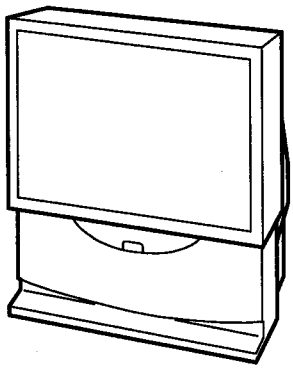
1. Adjustment Manual for this model is separately published.

	Adjustment Manual
Part No.	9-965-043-01

RM-Y118



KP-41T15



KP-46S15/53S15

MICROFILM

COLOR REAR VIDEO PROJECTOR

SONY®

※ Please file according to model size. ..... ■

41 | 46 | 53

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

D

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<COIL>				
L1501	1-412-533-21	INDUCTOR	47UH			
L1502	1-412-533-21	INDUCTOR	47UH			
L1503	1-412-524-11	INDUCTOR	8.2UH			
L1515	1-410-470-11	INDUCTOR	10UH			
L1516	1-410-482-31	INDUCTOR	100UH			
L1701	1-410-470-11	INDUCTOR	10UH			
L1801	1-406-975-21	COIL, CHOKE	47UH			
L1802	1-406-975-21	COIL, CHOKE	47UH			
		<TRANSISTOR>				
Q1501	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1502	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1551	8-729-216-22	TRANSISTOR	2SA1162-G			
Q1552	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1701	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1801	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1802	8-729-216-22	TRANSISTOR	2SA1162-G			
Q1803	8-729-900-36	TRANSISTOR	DTC124ES			
Q1804	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
Q1805	8-729-900-36	TRANSISTOR	DTC124ES			
		<RESISTOR>				
R1501	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1502	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1504	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1505	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1506	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1507	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1508	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1509⚠	1-249-383-91	CARBON	1.5	5%	1/4W	F
R1510	1-214-671-91	METAL	3.9	1%	1/4W	
R1511	1-214-671-71	METAL	3.9	1%	1/4W	
R1512	1-215-914-11	METAL OXIDE	330	5%	3W	F
R1513	1-214-671-71	METAL	3.9	1%	1/4W	
R1514	1-216-632-11	METAL CHIP	160	0.50%	1/10W	
R1515	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R1516	1-214-671-71	METAL	3.9	1%	1/4W	
R1517	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R1518	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R1519⚠	1-249-385-91	CARBON	2.2	5%	1/4W	F
R1520⚠	1-249-385-91	CARBON	2.2	5%	1/4W	F
R1521	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1522	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1523	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1551	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1552	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1553	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1554	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1559	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1562	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1603	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R1604	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R1605	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R1606	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R1607	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R1608	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R1610	1-214-729-00	METAL	1K	1%	1/4W	
R1612	1-214-729-00	METAL	1K	1%	1/4W	
R1613	1-214-673-00	METAL	4.7	1%	1/4W	
R1615	1-214-673-00	METAL	4.7	1%	1/4W	
R1616	1-214-673-00	METAL	4.7	1%	1/4W	
R1618	1-214-673-00	METAL	4.7	1%	1/4W	
R1619	1-214-673-00	METAL	4.7	1%	1/4W	
R1620	1-214-673-00	METAL	4.7	1%	1/4W	
R1621	1-214-673-00	METAL	4.7	1%	1/4W	
R1622	1-214-673-00	METAL	4.7	1%	1/4W	
R1623	1-214-729-00	METAL	1K	1%	1/4W	
R1624	1-214-729-00	METAL	1K	1%	1/4W	
R1625	1-214-673-00	METAL	4.7	1%	1/4W	
R1626	1-214-673-00	METAL	4.7	1%	1/4W	
R1627	1-214-673-00	METAL	4.7	1%	1/4W	
R1628	1-214-673-00	METAL	4.7	1%	1/4W	
R1629	1-214-673-00	METAL	4.7	1%	1/4W	
R1630	1-214-673-00	METAL	4.7	1%	1/4W	
R1631	1-214-729-00	METAL	1K	1%	1/4W	
R1632	1-214-673-00	METAL	4.7	1%	1/4W	
R1633	1-214-673-00	METAL	4.7	1%	1/4W	
R1634	1-214-729-00	METAL	1K	1%	1/4W	
R1635	1-214-673-00	METAL	4.7	1%	1/4W	
R1636	1-214-673-00	METAL	4.7	1%	1/4W	
R1637	1-214-673-00	METAL	4.7	1%	1/4W	
R1638	1-214-673-00	METAL	4.7	1%	1/4W	
R1639	1-214-673-00	METAL	4.7	1%	1/4W	
R1640	1-214-673-00	METAL	4.7	1%	1/4W	
R1641	1-214-673-00	METAL	4.7	1%	1/4W	
R1642	1-214-673-00	METAL	4.7	1%	1/4W	
R1643⚠	1-202-967-91	FUSIBLE	0.1	10%	1/6W	
R1644⚠	1-202-967-91	FUSIBLE	0.1	10%	1/6W	
R1645⚠	1-202-967-91	FUSIBLE	0.1	10%	1/6W	
R1646⚠	1-202-967-91	FUSIBLE	0.1	10%	1/6W	
R1647⚠	1-202-967-91	FUSIBLE	0.1	10%	1/6W	
R1648⚠	1-202-967-91	FUSIBLE	0.1	10%	1/6W	
R1717	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1721	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1737	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1740	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1748	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1749	1-216-295-00	CONDUCTOR, CHIP				
R1751	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1752	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1760	1-216-295-00	CONDUCTOR, CHIP				
R1788	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1801	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1802	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1803	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1804	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1805	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1806	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1807	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1808	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1809	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1810	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1811	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1812	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1813	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1814	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R1815	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R1816	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1817	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1818	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1819	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1820	1-216-025-00	METAL GLAZE	100	5%	1/10W	

D

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1821	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1823	1-208-811-11	METAL CHIP	16K	0.50%	1/10W	
R1824	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1825	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1826	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1827	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1828	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1829	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1830	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1831	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1832	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R1833	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1834	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1835	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1836	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1837	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1838	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1839	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1840	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1841	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1842	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1843	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1844	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1845	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1846	1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R1847	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1848	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1849	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1850	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1851	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R1852	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1853	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1854	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1855	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1856	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1857	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1858	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1859	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1860	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1861	1-216-473-11	METAL OXIDE	56	5%	3W	F
R1862	1-216-473-11	METAL OXIDE	56	5%	3W	F
R1863	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1864	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1865	1-216-473-11	METAL OXIDE	56	5%	3W	F
R1866	1-216-473-11	METAL OXIDE	56	5%	3W	F
R1868	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1869	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1870	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1871	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1872	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1873	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1874	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1875	1-208-824-11	METAL CHIP	56K	0.50%	1/10W	
R1876	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1877	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1878	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1879	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1880	1-218-768-11	METAL CHIP	470K	0.50%	1/10W	
R1881	1-216-295-00	CONDUCTOR, CHIP				
R1883	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R1884	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1885	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1886	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1887	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1888	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1889	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1890	1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R1891	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1892	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1893	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1894⚠	1-249-389-91	CARBON	4.7	5%	1/4W	F
R1895	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R1896⚠	1-249-389-91	CARBON	4.7	5%	1/4W	F
R1897	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1898	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1899	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1900	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1901	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1902	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1903	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1904	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1905	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1907	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1908	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R1909	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1910	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1911	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1912	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1913	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1914	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1915	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R1916	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1917	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1918	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1919	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R1920	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R1923	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R1925	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R1926	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1927	1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R1928	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1931	1-216-698-11	METAL CHIP	91K	0.50%	1/10W	
R1935	1-218-766-11	METAL CHIP	390K	0.50%	1/10W	
R1937	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1938	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R1940	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R1941	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1942	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1943	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R1944	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1947	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1948	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1949	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R1950	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R1951	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1952	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1954	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1955	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1956	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R1957	1-208-824-11	METAL CHIP	56K	0.50%	1/10W	
R1958	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W	
R1959	1-208-824-11	METAL CHIP	56K	0.50%	1/10W	
R1960	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1961	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R1962	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1963	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1964	1-216-049-00	METAL GLAZE	1K	5%	1/10W	

D HA U

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1965	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1966	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1967	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1970	1-208-774-11	METAL CHIP	470	0.50%	1/10W	
R1971	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R1981	1-216-473-11	METAL OXIDE	56	5%	3W	F
R1982	1-216-473-11	METAL OXIDE	56	5%	3W	F
R1983	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1984	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1985	1-216-025-00	METAL GLAZE	100	5%	1/10W	
		<THERMISTOR>				
TH1501	1-807-925-11	THERMISTOR				
TH1801	1-808-269-11	THERMISTOR				
		<CRYSTAL>				
X1701	1-579-917-11	VIBRATOR, CRYSTAL				
**********						
	*A-1372-099-A	HA BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C1301	1-126-964-11	ELECT	10MF	20%	50V	
C1304	1-126-964-11	ELECT	10MF	20%	50V	
		<CONNECTOR>				
CN1346	1-564-524-11	PLUG, CONNECTOR 9P				
CN1347	*1-564-521-11	PLUG, CONNECTOR 6P				
		<DIODE>				
D1304	8-719-053-43	DIODE SLR-325VCT31				
D1305	8-719-053-43	DIODE SLR-325VCT31				
		<IC>				
IC1301	8-741-780-51	IC SBX1780-51				
		<JACK>				
J1301	1-750-517-11	JACK BLOCK, PIN 3P				
		<RESISTOR>				
R1302	1-249-416-11	CARBON	820	5%	1/4W	
R1303	1-249-417-11	CARBON	1K	5%	1/4W	
R1304	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1305	1-249-411-11	CARBON	330	5%	1/4W	
R1306	1-249-411-11	CARBON	330	5%	1/4W	
R1307	1-249-420-11	CARBON	1.8K	5%	1/4W	
R1308	1-247-895-00	CARBON	470K	5%	1/4W	
R1309	1-247-895-00	CARBON	470K	5%	1/4W	
R1310	1-249-429-11	CARBON	10K	5%	1/4W	
R1311	1-247-815-91	CARBON	220	5%	1/4W	
R1312	1-247-804-11	CARBON	75	5%	1/4W	
R1314	1-247-807-31	CARBON	100	5%	1/4W	
		<SWITCH>				
S1301	1-571-731-11	SWITCH, TACTIL				
S1302	1-571-731-11	SWITCH, TACTIL				
S1303	1-571-731-11	SWITCH, TACTIL				
S1304	1-571-731-11	SWITCH, TACTIL				
S1305	1-571-731-11	SWITCH, TACTIL				
S1306	1-571-731-11	SWITCH, TACTIL				
S1307	1-571-731-11	SWITCH, TACTIL				
**********						
	*A-1373-511-A	U BOARD, COMPLETE				
		**********				
	1-923-505-16	WIRE UL1007 AWG24 70MM BRN				
		<CAPACITOR>				
C1101	1-128-551-11	ELECT	22MF	20%	50V	
C1102	1-124-903-11	ELECT	1MF	20%	50V	
C1103	1-124-903-11	ELECT	1MF	20%	50V	
C1104	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C1105	1-128-551-11	ELECT	22MF	20%	50V	
C1106	1-128-551-11	ELECT	22MF	20%	50V	
C1107	1-124-903-11	ELECT	1MF	20%	50V	
C1108	1-124-903-11	ELECT	1MF	20%	50V	
C1109	1-128-551-11	ELECT	22MF	20%	50V	
C1110	1-124-903-11	ELECT	1MF	20%	50V	
C1111	1-124-903-11	ELECT	1MF	20%	50V	
C1121	1-126-935-11	ELECT	470MF	20%	16V	
C1122	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1123	1-124-903-11	ELECT	1MF	20%	50V	
C1124	1-128-551-11	ELECT	22MF	20%	50V	
C1125	1-124-903-11	ELECT	1MF	20%	50V	
C1126	1-104-665-11	ELECT	100MF	20%	25V	
C1127	1-104-663-11	ELECT	33MF	20%	25V	
C1128	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1132	1-124-902-00	ELECT	0.47MF	20%	50V	
C1133	1-128-551-11	ELECT	22MF	20%	50V	
C1134	1-104-665-11	ELECT	100MF	20%	25V	
C1136	1-128-551-11	ELECT	22MF	20%	50V	
C1137	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C1138	1-124-902-00	ELECT	0.47MF	20%	50V	
C1139	1-126-964-11	ELECT	10MF	20%	50V	
C1145	1-128-499-11	ELECT	220MF	20%	16V	
C1146	1-124-902-00	ELECT	0.47MF	20%	50V	
C1147	1-124-902-00	ELECT	0.47MF	20%	50V	
C1148	1-124-902-00	ELECT	0.47MF	20%	50V	
C1149	1-124-902-00	ELECT	0.47MF	20%	50V	
C1150	1-128-499-11	ELECT	220MF	20%	16V	
C1151	1-128-499-11	ELECT	220MF	20%	16V	
C1152	1-128-499-11	ELECT	220MF	20%	16V	
C1153	1-104-665-11	ELECT	100MF	20%	25V	
		<FILTER BLOCK>				
CM1101	1-466-912-21	FILTER BLOCK, COMB				
		<CONNECTOR>				
CN1147	*1-564-509-11	PLUG, CONNECTOR 6P				
CN1150	1-573-300-21	CONNECTOR, BOARD TO BOARD 18P				
CN1155	*1-565-928-11	CONNECTOR (TUB) 30P				
CN1156	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P				

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D1101	8-719-110-17	DIODE RD10ESB2	
D1102	8-719-110-17	DIODE RD10ESB2	
D1103	8-719-110-17	DIODE RD10ESB2	
D1104	8-719-110-17	DIODE RD10ESB2	
D1105	8-719-110-17	DIODE RD10ESB2	
D1106	8-719-110-17	DIODE RD10ESB2	
D1107	8-719-110-17	DIODE RD10ESB2	
D1108	8-719-110-17	DIODE RD10ESB2	
D1109	8-719-110-17	DIODE RD10ESB2	
D1111	8-719-110-17	DIODE RD10ESB2	
D1112	8-719-110-17	DIODE RD10ESB2	
D1113	8-719-110-17	DIODE RD10ESB2	
D1114	8-719-110-17	DIODE RD10ESB2	
D1115	8-719-110-17	DIODE RD10ESB2	
D1116	8-719-110-17	DIODE RD10ESB2	
D1117	8-719-110-17	DIODE RD10ESB2	
D1118	8-719-110-17	DIODE RD10ESB2	
D1120	8-719-110-17	DIODE RD10ESB2	
D1121	8-719-110-36	DIODE RD13ESB2	
D1122	8-719-110-36	DIODE RD13ESB2	
D1123	8-719-110-36	DIODE RD13ESB2	
D1124	8-719-110-36	DIODE RD13ESB2	
D1125	8-719-109-66	DIODE RD3.3ESB2	
D1126	8-719-110-17	DIODE RD10ESB2	
D1127	8-719-110-17	DIODE RD10ESB2	
D1135	8-719-911-19	DIODE 1SS119-25	
		<IC>	
IC1101	8-752-068-46	IC CXA1855S	
IC1102	8-759-701-59	IC NJM7809FA	
		<JACK>	
J1101	1-750-515-11	TERMINAL BLOCK, S 3P	
J1102	1-750-517-11	JACK BLOCK, PIN 3P	
J1104	1-750-517-11	JACK BLOCK, PIN 3P	
J1105	1-750-516-11	JACK BLOCK, PIN 2P	
J1106	1-563-760-11	JACK, MINIATUER (DIA. 3.5)	
J1107	1-563-760-11	JACK, MINIATUER (DIA. 3.5)	
		<COIL>	
L1101	1-410-476-11	INDUCTOR 33UH	
L1104	1-410-473-11	INDUCTOR 18UH	
L1105	1-410-494-11	INDUCTOR 1MMH	
		<TRANSISTOR>	
Q1102	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1103	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1104	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q1105	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1106	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1108	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q1109	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1110	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1111	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1112	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q1113	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q1114	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q1115	8-729-422-27	TRANSISTOR 2SD601A-Q	

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<RESISTOR>			
R1101	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1102	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1103	1-247-804-11	CARBON	75	5% 1/4W	
R1104	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1105	1-247-804-11	CARBON	75	5% 1/4W	
R1106	1-247-804-11	CARBON	75	5% 1/4W	
R1107	1-216-113-00	METAL GLAZE	470K	5% 1/10W	
R1108	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1109	1-216-113-00	METAL GLAZE	470K	5% 1/10W	
R1110	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1111	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1112	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1113	1-247-804-11	CARBON	75	5% 1/4W	
R1114	1-216-113-00	METAL GLAZE	470K	5% 1/10W	
R1115	1-216-113-00	METAL GLAZE	470K	5% 1/10W	
R1116	1-216-095-00	METAL GLAZE	82K	5% 1/10W	
R1117	1-216-095-00	METAL GLAZE	82K	5% 1/10W	
R1118	1-216-095-00	METAL GLAZE	82K	5% 1/10W	
R1119	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1120	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1127	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1129	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1130	1-216-067-00	METAL GLAZE	5.6K	5% 1/10W	
R1132	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1133	1-216-067-00	METAL GLAZE	5.6K	5% 1/10W	
R1134	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1140	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1141	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1142	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1145	1-216-051-00	METAL GLAZE	1.2K	5% 1/10W	
R1146	1-216-051-00	METAL GLAZE	1.2K	5% 1/10W	
R1149	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1150	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1151	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1152	1-216-043-91	METAL GLAZE	560	5% 1/10W	
R1153	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R1154	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1155	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R1156	1-216-043-91	METAL GLAZE	560	5% 1/10W	
R1157	1-216-045-00	METAL GLAZE	680	5% 1/10W	
R1160	1-216-049-00	METAL GLAZE	1K	5% 1/10W	
R1161	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1162	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1165	1-249-403-11	CARBON	68	5% 1/4W	
R1166	1-216-113-00	METAL GLAZE	470K	5% 1/10W	
R1167	1-216-113-00	METAL GLAZE	470K	5% 1/10W	
R1168	1-216-113-00	METAL GLAZE	470K	5% 1/10W	
R1169	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1170	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1171	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1172	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1173	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1174	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1175	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1176	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1178	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1179	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1180	1-216-025-00	METAL GLAZE	100	5% 1/10W	
R1181	1-216-097-00	METAL GLAZE	100K	5% 1/10W	
R1182	1-216-113-00	METAL GLAZE	470K	5% 1/10W	

U | **ZR (KP-41T15)** | **ZR (KP-46S15/53S15)** | **ZG**

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1183	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1184	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1185	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1186	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1187	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1188	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1190	1-216-295-00	CONDUCTOR, CHIP				
R1191	1-216-295-00	CONDUCTOR, CHIP				
R1192	1-216-295-00	CONDUCTOR, CHIP				
R1193	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1194	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1196	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1197	1-216-041-00	METAL GLAZE	470	5%	1/10W	

****

*A-1390-487-A ZR BOARD, COMPLETE (KP-41T15)
****

4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

C1401	1-162-115-00	CERAMIC	330PF	10%	2KV
C1402	1-162-115-00	CERAMIC	330PF	10%	2KV
C1403	1-102-978-00	CERAMIC	220PF	5%	50V
C1404	1-107-638-11	ELECT	33MF	20%	160V
C1405	1-104-665-11	ELECT	100MF	20%	25V
C1406	1-107-370-11	FILM	0.1MF	10%	200V
C1407	1-104-665-11	ELECT	100MF	20%	25V
C1408	1-107-362-11	FILM	0.0047MF	10%	200V
C1409	1-107-667-11	ELECT	2.2MF	20%	160V
C1410	1-107-362-11	FILM	0.0047MF	10%	200V
C1411	1-137-364-11	FILM	0.001MF	5%	50V
C1412	1-137-364-11	FILM	0.001MF	5%	50V
C1413	1-161-830-00	CERAMIC	0.0047MF	99%	500V
C1414	1-126-940-11	ELECT	330MF	20%	16V
C1415	1-164-046-11	CERAMIC	10PF	0.5PF	50V
C1416	1-102-973-00	CERAMIC	100PF	5%	50V

<CONNECTOR>

CN1411*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P
CN1412*	1-564-507-11	PLUG, CONNECTOR 4P
CN1413*	1-564-506-11	PLUG, CONNECTOR 3P
CN1414*	1-564-509-11	PLUG, CONNECTOR 6P
CN1415*	1-564-510-11	PLUG, CONNECTOR 7P

<DIODE>

D1401	8-719-110-88	DIODE RD39ESB2
D1402	8-719-110-88	DIODE RD39ESB2

<TRANSISTOR>

Q1401	8-729-017-06	TRANSISTOR 2SC4793
Q1402	8-729-017-05	TRANSISTOR 2SA1837
Q1403	8-729-140-96	TRANSISTOR 2SD774-34

<RESISTOR>

R1401	1-249-414-11	CARBON	560	5%	1/4W
R1402	1-249-414-11	CARBON	560	5%	1/4W
R1403	1-202-822-00	SOLID	2.2K	20%	1/2W
R1404	1-202-822-00	SOLID	2.2K	20%	1/2W
R1405	1-249-417-11	CARBON	1K	5%	1/4W
R1406	1-216-479-11	METAL OXIDE	560	5%	3W F
R1407	1-249-400-11	CARBON	39	5%	1/4W F
R1408	1-249-384-11	CARBON	1.8	5%	1/4W F
R1409	1-249-384-11	CARBON	1.8	5%	1/4W F
R1410	1-247-734-11	CARBON	39	5%	1/2W F
R1411	1-249-417-11	CARBON	1K	5%	1/4W F
R1412	1-249-414-11	CARBON	560	5%	1/4W
R1413	1-249-432-11	CARBON	18K	5%	1/4W
R1414	1-249-432-11	CARBON	18K	5%	1/4W
R1415	1-249-414-11	CARBON	560	5%	1/4W F
R1416	1-216-451-11	METAL OXIDE	120	5%	2W F
R1417	1-216-475-11	METAL OXIDE	120	5%	3W F
R1418	1-249-377-11	CARBON	0.47	5%	1/4W F
R1419	1-247-815-91	CARBON	220	5%	1/4W
R1420	1-216-475-11	METAL OXIDE	120	5%	3W F
R1421	1-249-417-11	CARBON	1K	5%	1/4W

****

*A-1390-513-A ZR BOARD, COMPLETE (KP-46S15/53S15)
****

4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

C1401	1-162-115-00	CERAMIC	330PF	10%	2KV
C1402	1-162-115-00	CERAMIC	330PF	10%	2KV

<CONNECTOR>

CN1411*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P
CN1412*	1-564-507-11	PLUG, CONNECTOR 4P
CN1413*	1-564-506-11	PLUG, CONNECTOR 3P
CN1415*	1-564-506-11	PLUG, CONNECTOR 3P

<RESISTOR>

R1401	1-249-414-11	CARBON	560	5%	1/4W
R1402	1-249-414-11	CARBON	560	5%	1/4W
R1403	1-202-822-00	SOLID	2.2K	20%	1/2W
R1404	1-202-822-00	SOLID	2.2K	20%	1/2W
R1417	1-216-475-11	METAL OXIDE	120	5%	3W F
R1420	1-216-475-11	METAL OXIDE	120	5%	3W F

****

*A-1390-489-A ZG BOARD, COMPLETE (KP-41T15)
****

*A-1390-512-A ZG BOARD, COMPLETE (KP-46S15/53S15)
****

<CAPACITOR>

C1431	1-162-115-00	CERAMIC	330PF	10%	2KV
C1432	1-162-115-00	CERAMIC	330PF	10%	2KV
C1433	1-102-973-00	CERAMIC	100PF	5%	50V (KP-41T15)

<CONNECTOR>

CN1441*	1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN1442*	1-564-507-11	PLUG, CONNECTOR 4P	
CN1443*	1-564-506-11	PLUG, CONNECTOR 3P	
CN1445*	1-564-506-11	PLUG, CONNECTOR 3P	(KP-46S15/53S15)

ZG ZB

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
CN1445	*1-564-510-11	PLUG, CONNECTOR 7P				(KP-41T15)
		<RESISTOR>				
R1431	1-249-414-11	CARBON	560	5%	1/4W	
R1432	1-249-414-11	CARBON	560	5%	1/4W	
R1433	1-202-822-00	SOLID	2.2K	20%	1/2W	
R1434	1-202-822-00	SOLID	2.2K	20%	1/2W	
R1435	1-216-475-11	METAL OXIDE	120	5%	3W	F
R1436	1-216-475-11	METAL OXIDE	120	5%	3W	F
R1437	1-249-417-11	CARBON	1K	5%	1/4W	(KP-41T15)
		**********				
	*A-1390-491-A	ZB BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C1461	1-162-115-00	CERAMIC	330PF		10%	2KV
C1462	1-162-115-00	CERAMIC	330PF		10%	2KV
		<CONNECTOR>				
CN1471	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P				
CN1472	*1-564-507-11	PLUG, CONNECTOR 4P				
CN1473	*1-564-506-11	PLUG, CONNECTOR 3P				
		<RESISTOR>				
R1461	1-249-414-11	CARBON	560	5%	1/4W	
R1462	1-249-414-11	CARBON	560	5%	1/4W	
R1463	1-202-822-00	SOLID	2.2K	20%	1/2W	
R1464	1-202-822-00	SOLID	2.2K	20%	1/2W	
R1465	1-216-475-11	METAL OXIDE	120	5%	3W	F
R1466	1-216-475-11	METAL OXIDE	120	5%	3W	F
		**********				
		MISCELLANEOUS				
		**********				
	⚠1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)				
	⚠1-452-790-11	NECK ASSY (KP-41T15)				
	⚠1-452-790-21	NECK ASSY (KP-41T15)				
	1-504-785-11	SPEAKER (10CM)				
	1-556-945-21	CABLE, P-P				
	⚠1-559-865-41	LEAD ASSY, HIGH-VOLTAGE				
	1-561-306-00	JACK, PIN (F)				
	⚠1-769-837-11	CORD, POWER(WITH NOISE FILTER) 7.0A/125V				
	⚠1-900-211-34	LEAD ASSY, HV				
	⚠8-451-463-11	DY Y829PA2N (R),(G)				
	⚠8-451-463-21	DY Y829PA2N2 (B)				
	⚠8-598-955-00	BLOCK ASSY, HIGH-VOLTAGE				
V901	⚠8-736-078-05	PICTURE TUBE 07MAB5(G)				
V902	⚠8-736-079-05	PICTURE TUBE 07MAB5(B)				(KP-41T15/46S15)
	⚠8-736-081-05	PICTURE TUBE 07MAB6(B)				(KP-53S15)
V903	⚠8-736-080-05	PICTURE TUBE 07MAB5(R)				(KP-41T15/46S15)
	⚠8-736-082-05	PICTURE TUBE 07MAB6(R)				(KP-53S15)
		**********				

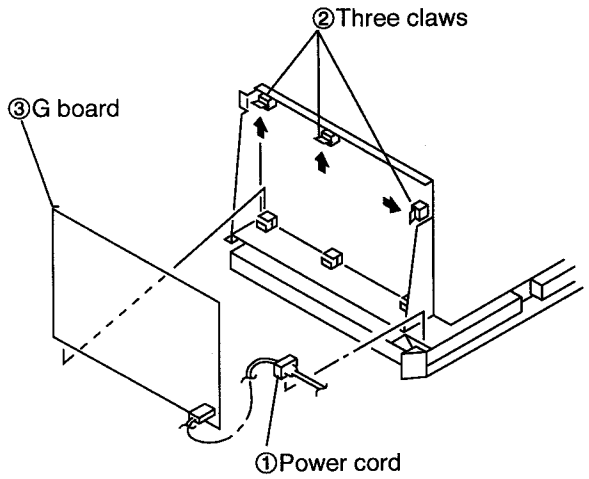
REF.NO.	PART NO.	DESCRIPTION	REMARK
		ACCESSORIES AND PACKING MATERIALS	
		**********	
	3-798-907-21	MANUAL, INSTRUCTION	
	*4-041-426-01	BAG, PROTECTION	(KP-53S15)
	*4-042-463-01	SHEET, PROTECTION	(KP-53S15)
	*4-047-776-01	TRAY	(KP-53S15)
	*4-047-777-01	INDIVIDUAL CARTON	(KP-53S15)
	*4-047-778-01	CUSHION (UPPER) (ASSY)	(KP-53S15)
	*4-047-779-01	CUSHION (LOWER) (ASSY)	(KP-53S15)
	*4-048-579-01	CUSHION (UPPER) (ASSY)	(KP-41T15)
	*4-048-580-01	CUSHION (LOWER) (ASSY)	(KP-41T15)
	*4-048-581-01	TRAY	(KP-41T15)
	*4-048-582-01	INDIVIDUAL CARTON	(KP-41T15)
	*4-049-155-01	BAG, PROTECTION	(KP-41T15)
		REMOTE COMMANDER	
		**********	
	1-467-059-21	REMOTE COMMANDER (RM-Y118)	
	9-903-826-01	COVER, BATTERY (FOR RM-Y118)	

Sony Corporation
Consumer A&V Products Company
TV & Display Products Div.

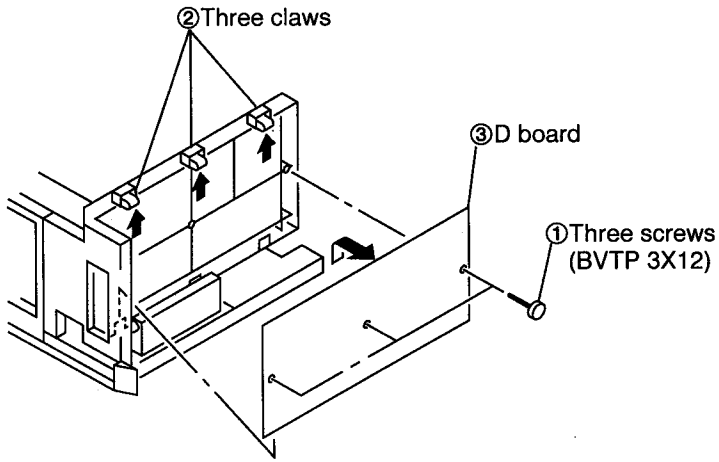
9-965-042-01

English
95ER02496-1
Printed in JAPAN
© 1995. 5

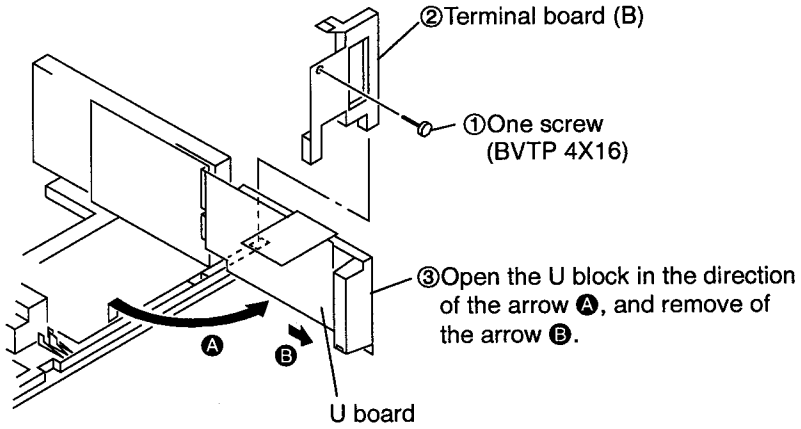
2-4. G BOARD REMOVAL



2-5. D BOARD REMOVAL



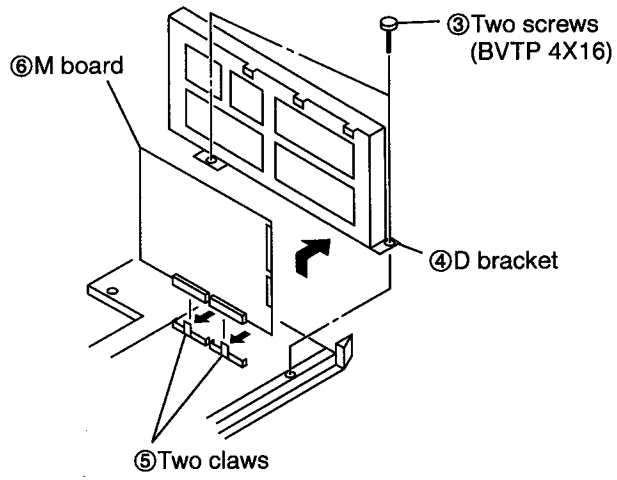
2-6. U BOARD REMOVAL



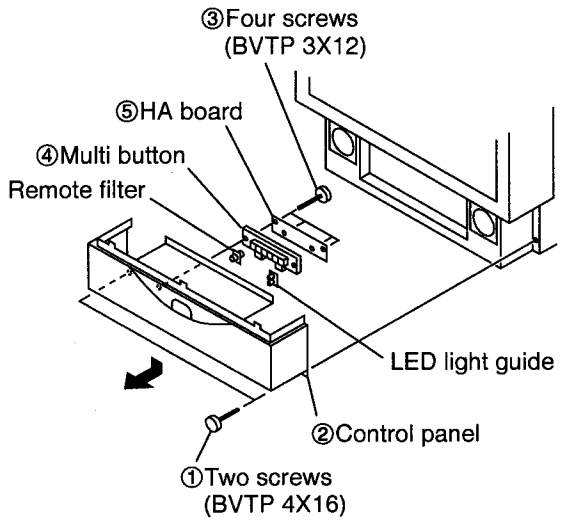
2-7. M BOARD REMOVAL

① **Remove the D board. (Refer to 2-5.)**

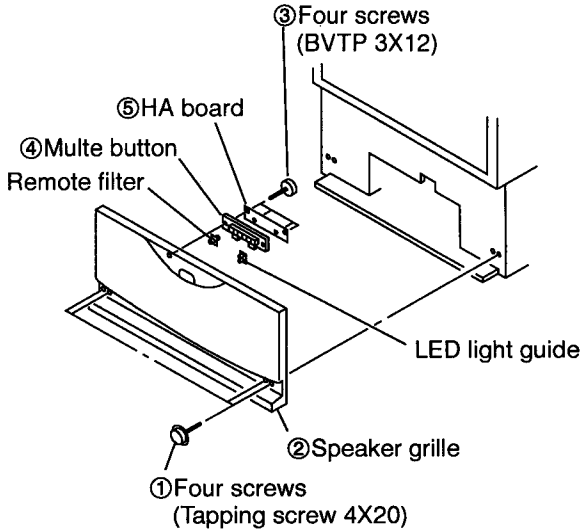
② **Remove the U board. (Refer to 2-6.)**



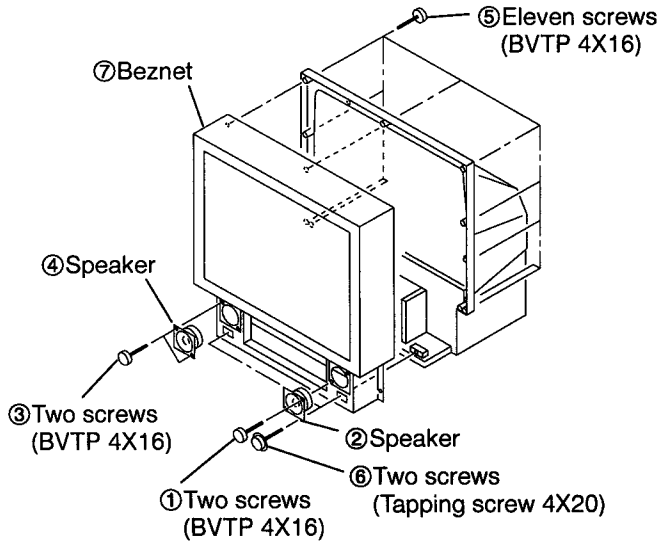
2-8-1. HA BOARD REMOVAL (KP-41T15)



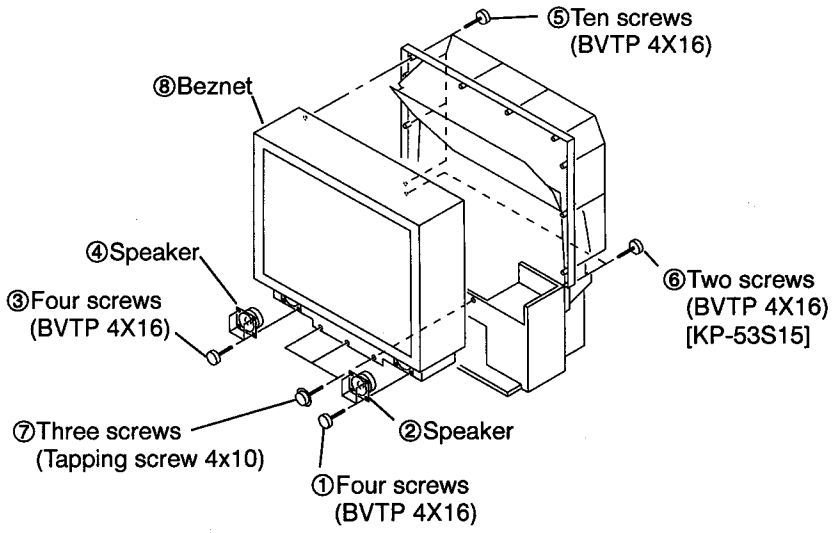
2-8-2. HA BOARD REMOVAL (KP-46S15/53S15)



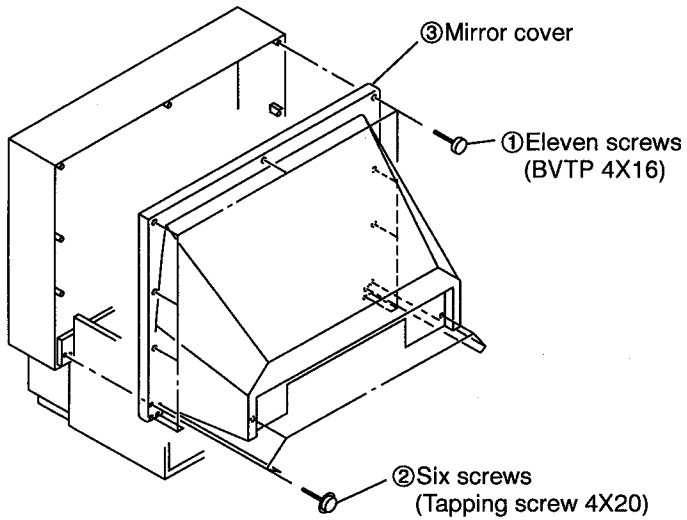
2-9-1. BEZNET REMOVAL (KV-41T15)



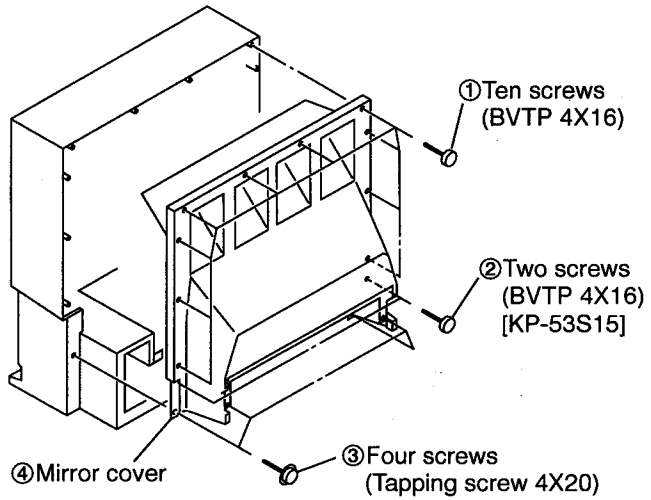
2-9-2. BEZNET REMOVAL (KV-46S15/53S15)



2-10-1. MIRROR COVER REMOVAL (KP-41T15)

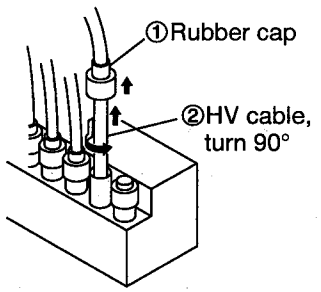


2-10-2. MIRROR COVER REMOVAL (KP-46S15/53S15)

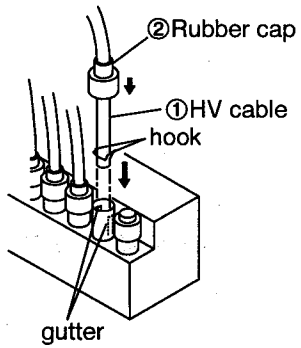


2-11. HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL

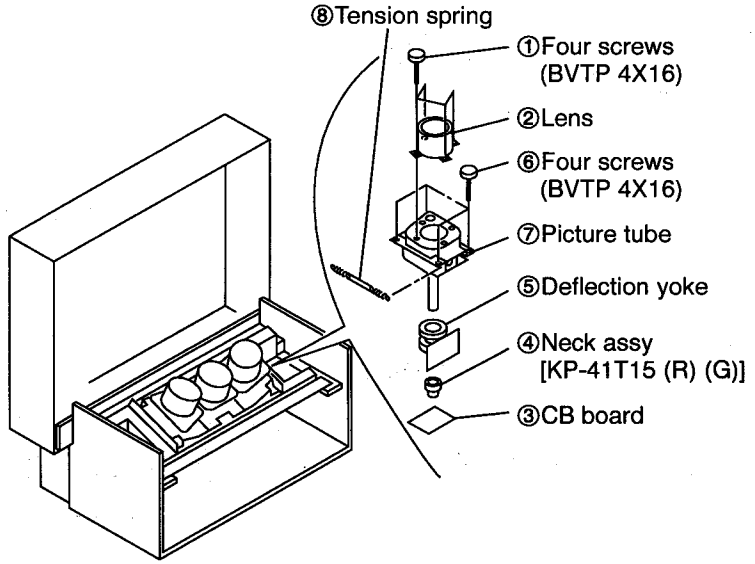
(1) Remover



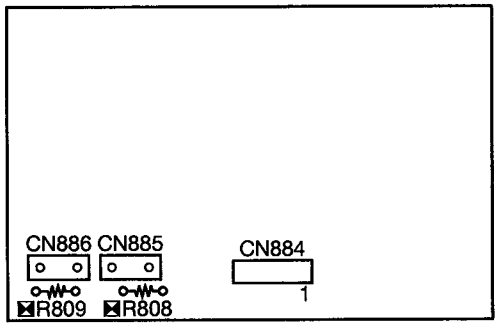
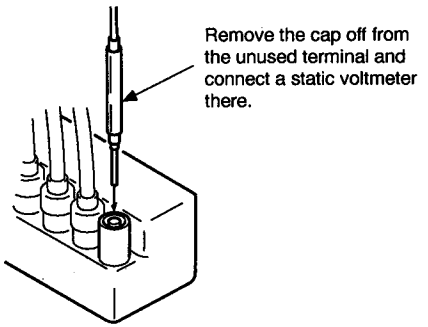
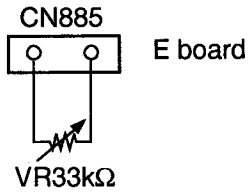
(2) Installation



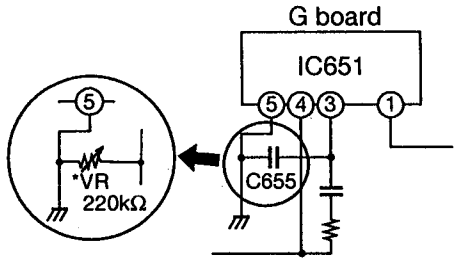
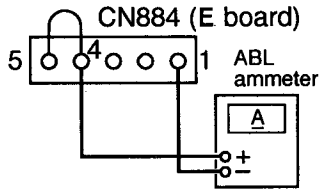
2-12. PICTURE TUBE REMOVAL

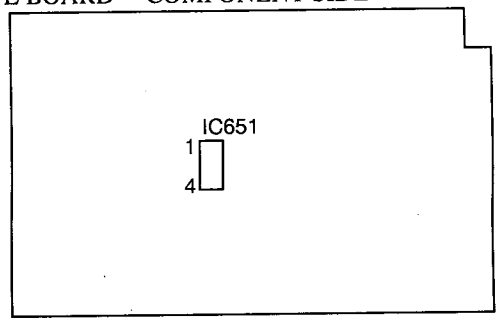


SECTION 3
SAFETY RELATED ADJUSTMENTS

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
HV HOLD DOWN CIRCUIT OPERATIONS CHECK AND ADJUSTMENT (*⊠ RESISTOR) When replacing the parts marked *◪ on the right, check the HV hold down and adjust.		*◪ marked parts C818, D804, D806, D809, D909, D912, Q915, R809, R855, R856, R857, R858, R954, R955, R983, R984, R988, R991, R995, R996, R998, T803, FBT E board HV Block	*⊠ R809, R988	E BOARD – COMPONENT SIDE – 
1. Remove the cap for the unconnected pin in the *high-voltage block and connect a *Static Voltmeter. 2. Input 130 VAC power.	*Static Voltmeter	*HV Block		* 
3. Receive the *Dot siganl and set the *PICTURE and BRIGHTNESS settings to their minimums.	*Dot pattern		*PICTURE ..... minimum BRIGHTNESS ..... minimum	
4. Connect a *33 kΩ variable resistor across the E board *CN885 connector (with the variable resistor set to its maximum).				* 

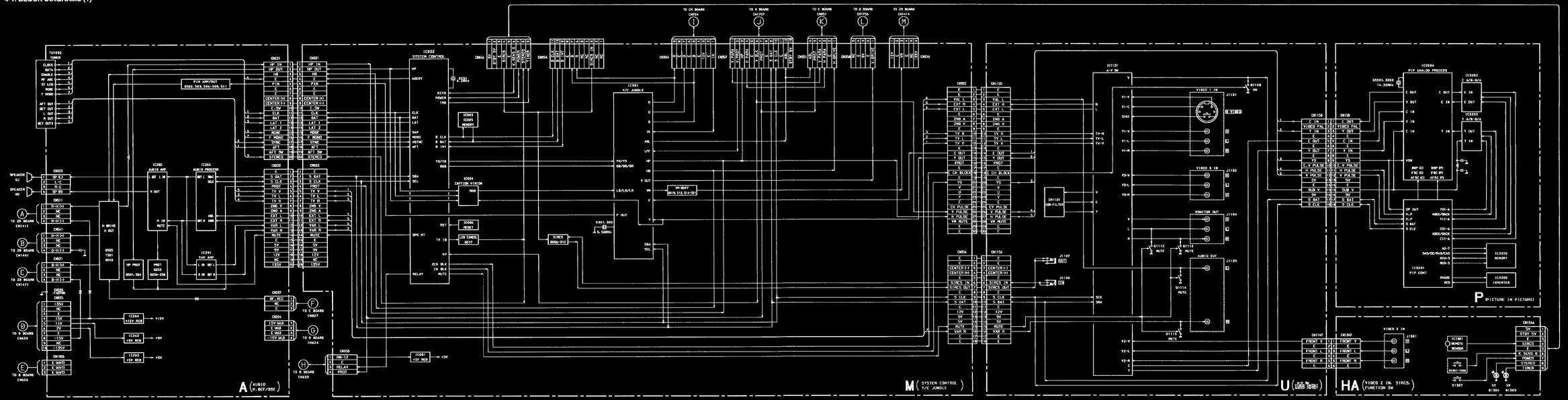
ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
5. Gradually lower the value of the variable resistor and check that the hold down circuit operates at a Static Voltmeter reading of *33.7 ± 0.8 kVDC and that the rasters disappear. 6. If the hold down circuit operates and the rasters disappear at a Static Voltmeter reading of *34.0 VDC or higher, remove resistor *R809 and mount a *16.0 kΩ 1/4W RN at *R988. If the hold down circuit operates and the rasters disappear at a Static Voltmeter reading of *32.0 VDC or lower, remove resistor R809 and mount *6.2 kΩ 1/4W RN at *R988. 7. Check Item 5 again.			*R988 *R988	*33.7 ± 0.8 kVDC *34.0 VDC or higher *16.0 kΩ 1/4W *32.0 VDC or lower *6.2 kΩ 1/4W * CN886 (E board) R809 R988
HV REGULATION CIRCUIT CHECK AND ADJUSTMENT (*⊠ RESISTOR) When replacing the parts marked *◪ on the right, check the HV regulation and adjust.		*◪ marked parts C918, C930, C934, C980, D902, D920, D925, Q909, R808, R851, R929, R936, R939, R942, R944, R945, R946, R947, R950, R960, R965, R967, R971, R975, R976, R982, R983, R985, R998..... E Board HV Block	*⊠ R808, R983	E BOARD – COMPONENT SIDE – CN886 CN885 CN884 R809 R808 1
1. Remove the cap for the unconnected pin in the *high-voltage block and connect a *Static Voltmeter. 2. Input 120 VAC power. 3. Receive the *Dot signal and set the *PICTURE and BRIGHTNESS settings to their minimums.	*Static Voltmeter *Dot pattern	*HV Block	*PICTURE .....minimum BRIGHTNESS .....minimum	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
OVERVOLTAGE PROTECTION (OVP) OPERATIONS CHECK				
1. Connect a *220 kΩ variable resistance rheostat to the G board C655 (between Pins ③ and ⑤ of IC651).				* 
2. Input *120.0 ± 1.0 VAC, 60 Hz power.				*120.0 ± 1.0 VAC, 60 Hz
3. Receive the *Dot signal and set the *PICTURE and BRIGHTNESS settings to their minimums.	*Dot pattern		*PICTURE ..... minimum BRIGHTNESS ..... minimum	
4. Gradually lower the value of the connected variable resistance and check that when the +B line *voltage is *143.5 ± 5.5 VDC, the overvoltage circuit operates and the rasters disappear.	*Digital Multimeter			*143.5 ± 5.5 VDC
5. Remove the variable resistor and check the +B line voltage.				
BEAM CURRENT (ΣIk) PROTECTION CIRCUIT CHECK				
1. Connect the *ABL ammeter between *Pins ① and ④ of the CN884 on the E board. Have Pins ② and ③ open.	*Ammeter			* 
2. Input *120.0 ± 1.0 VAC, 60 Hz power.				*120.0 ± 1.0 VAC, 60 Hz
3. Receive a *monoscope signal and set the *PICTURE and BRIGHTNESS settings to their minimums.	*Monoscope pattern		*PICTURE ..... minimum BRIGHTNESS ..... minimum	

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
4. Gradually raise the *PICTURE and BRIGHTNESS settings and check that below an *ABL current of 3.35 mA (including dark current), the beam current protection circuit operates and the rasters disappear.			*PICTURE BRIGHTNESS	*Less than 3.35 mA
+B, +B MAX CHECK When replacing the G board IC651, check the following.				E BOARD – COMPONENT SIDE – 
1. Input *120.0 ± 1.0 V, 60 Hz power. 2. Receive the *Dot signal and set the *PICTURE and BRIGHTNESS settings to their minimums.	*Dot pattern		*PICTURE ..... minimum BRIGHTNESS ..... minimum	*120.0 ± 1.0 V, 60 Hz
3. Check that the *+B line voltage is now *135.0 ± 2.0 VDC. 4. Set the power supply to *130.0 $^{+2.0}_{-0}$VAC. 5. Check that the *+B line voltage is *137.0 VDC max. 6. If either 3 or 5 is not satisfied, replace IC651 again.		*CN681 pin ① *CN681 pin ①		*135.0 ± 2.0 VDC *130.0 $^{+2.0}_{-0}$VAC *Less than 137.0 VDC

SECTION 4
DIAGRAMS

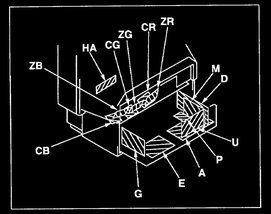
4-1. BLOCK DIAGRAMS (1)



BLOCK DIAGRAMS (2)

ZR
DY
CN1411
R-H (+)
NC
R-H (-)
TO A BOARD CN511
CN1414
12V
E
VM
135V
TO M BOARD CN314
CN1412
HR IN
VR IN
VR RET
HR RET
CN1413
V.DEF
V.RET
CN1415
VM.OUT
VM.RET
ZG
CN1445
VM.IN
CN1442
HG IN
VG IN
VG RET
HG RET
CN1441
G-H (+)
G-H (-)
CN1443
TO A BOARD CN541
ZB
CN1472
HB IN
VB IN
VB RET
HB RET
CN1473
CN1471
B-H (+)
B-H (-)
TO A BOARD CN571
D (RGB CONV CORR, V OUT / SUB DY DRIVE)
IC1802 H WAVE GEN.
H BLK
H1-H4
IC1806 V WAVE GEN.
V1-V4
CN1757
V.PARA
V.PROT
H.P.
H.PARA
V.BLK
PROT
S DAT
S CLK
ABL
STBY 5V
TO M BOARD CN357
D1501
PROTECT
IC1801 G CONV CORR
V OUT
H OUT
MP IN 2
MP OUT
IC1701 REGI-CONTROL
SDA
SCL
RST
IC1702 RESET
X1701 4.2MHz
IC1805 R CONV CORR
RV
RH
IC1809 B CONV CORR
BV
BH
MP IN 1
IC1931 V CORR & SHAD DRIV
V1-V3
IC1601 SUB DY DRIVE
IC1602 SUB DY DRIVE
IC1932 V CORR & BUFF
H2, H4
CN1642
HG OUT
VG OUT
VG RET
HG RET
CN1672
HB OUT
VB OUT
VB RET
HB RET
CN1612
HR OUT
VR OUT
VR RET
HR RET
CN1513
IC1501 V OUT
CN1756
V.DRIVE
9V
NC
TO M BOARD CN358
IC1804 +5V REG
IC1808 +12V REG
IC1803 -5V REG
IC1807 -12V REG
+5V
+12V
-5V
-12V
CN1716
15V
-15V
CN1509
R/S
B/S
E (H PHASE, HV REF / HV DET, HV REG-DET)
CN884
ABL TO FBT
ABL TO YCJ
ABL TO HB
H DRIVE
IC904 (1/2) H SAW AMP
H-SAW Q909
IC901 H PHASE
T802 HDT
HV OUT Q806
HV REG OUT Q808
T803 LOT
T801 FBT
HV
FV
Q914 HV STOP
Q906 HV STOP
Q908 HV STOP
IC904 (2/2) HV REF
IC902 HV DET
D928 SW
IC903 HV REG DET
BUFF Q915
CN802
H (-)
H (+)
200V
CN886
R988
CN904
HV REG
IC906 +12V REG
REG PROT Q912
R983
CN885
CN851
H.DRIVE
V.PARA
ABL
TO M BOARD CN351
PROT Q913
D922 PROT
Q807, 809 DF OUT
CN827
DF VCC
TO A BOARD CN527
G2 BUFF Q811, 813
D818
CN881
135V
IC905 -12V REG
CN882
G2
DF
DET
HV BLOCK
FOCUS PACK
CR (R OUT)
CN702
H-
H+
CN704
IK
12V
B
G
R
TO M BOARD CN304
CN709
IK BUFF Q701
CN701
IC701 VIDEO AMP
V901 PICTURE TUBE
CN703
CN705
IK1
IK2
VB
CG (G OUT)
CN732
CN734
CN731
IC731 VIDEO AMP
V902 PICTURE TUBE
CN733
CN735
CB (B OUT)
CN762
G1
CN763
CN761
IC761 VIDEO AMP
V903 PICTURE TUBE
G (POWER SUPPLY)
AC IN
CN617
AC (W)
AC (L)
T601, 605
D601
SW Q601, 602
RY601
RY602
T604
T602
D651
D655
REG CONT. LIMIT, SOFT START IC651, Q652, Q653
+B OCP PROT Q651, 661
PROT. LVP
CN626
E (ANT)
TO A BOARD CN1026
CN653
RM-12
RELAY
TO M BOARD CN053
IC652 +12V REG
T603
RY DRIVE, LATCH Q655, 656, 657
7V LVP Q654, D670
CN624
15V (AU)
E (AU)
-15V (AU)
TO A BOARD CN224
CN616
CN625
11V
7V
-135V
TO A BOARD CN225
CN681

4-2. CIRCUIT BOARDS LOCATION



4-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms.
  kΩ = 1000 Ω, MΩ = 1000kΩ
- Indication of resistance, which dose not have one for rating electrical power, is as follows.

  Pitch : 5mm
  Rating electrical power : ¼W

- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-chassis.
- The components identified by ⚠ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
  Should replacement be required, replace only with the value originally used.
- When replacing components identified by ⚠, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⚠ and repeat the adjustment until the specified value is achieved.
  (Refer to R808, R809, R983 and R988 adjustment on Page 20 – 24.)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (⚠)	Adjustment (⚠)
HV Block Q915, D804, D808, D809, D909, D912, C818, R809, R855, R856, R857, R858, R954, R955, R983, R984, R988, R991, R995, R998, R998, T801 (FBT), T803 ·····E BOARD	HV HOLD-DOWN (R809, R988)
HV Block Q909, D902, D920, D925, C918, C930, C934, C980, R808, R851, R929, R938, R939, R942, R944, R945, R946, R947, R950, R985, R987, R971, R975, R976, R982, R983, R985, R988·····E BOARD	HV Reagurater (R808, R983)

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-BL	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: AUR	HIGH RIPPLE

- As to the voltage value shown by the semiconductors on the Schematic Diagram, see the another list.
- Readings are taken with a color-bar signal input.
- Readings are taken with a 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
  ※ : Measurement impossibility.
- Circuit voltages are subject to change.
- : 50 Hz.
- : DC.
- : signal path.(E)

Note: The symbol ⚠ display is on the component side.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

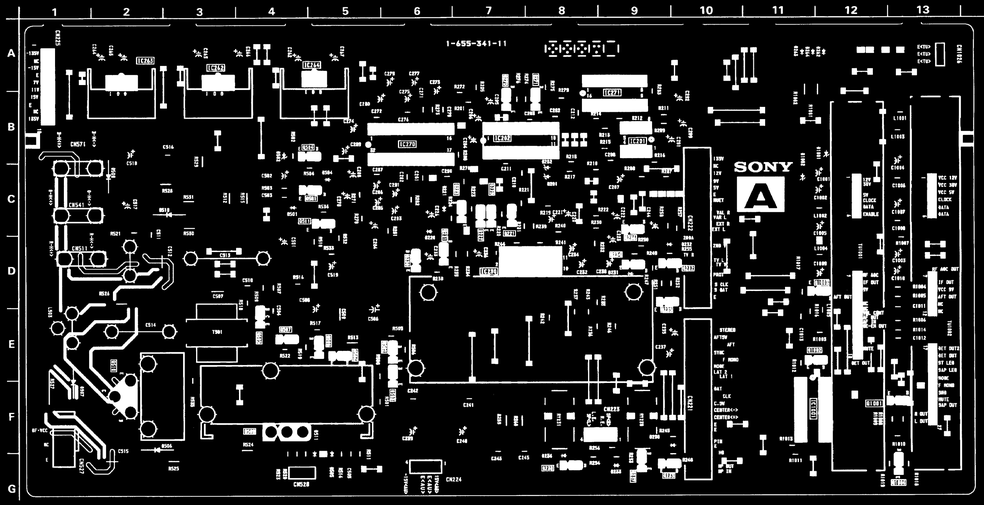
The symbol ⚠ indicate fast operating fuse. Replace only with fuse of same rating as maked.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Le symbole ⚠ indique une fusible a action rapide. Doit etre remplacee par une fusible de meme valeur, comme maque.

A AUDIO, H. DEF/BBE

– A BOARD –

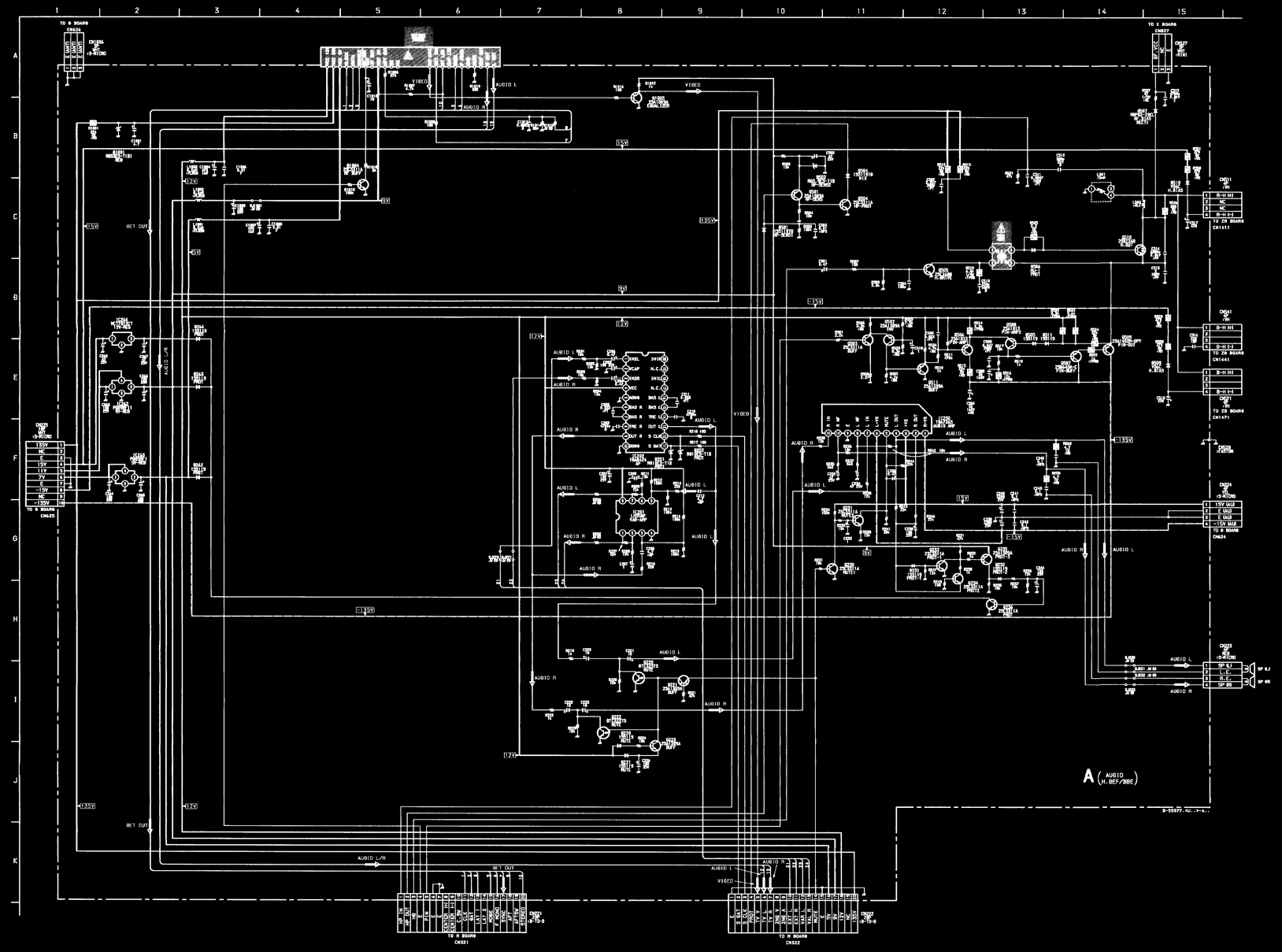


A BOARD

IC	
IC201	B – 9
IC202	B – 7
IC230	D – 8
IC262	A – 3
IC263	A – 2
IC264	A – 5

TRANSISTOR	
Q220	C – 7
Q221	C – 7
Q223	C – 7
Q230	D – 8
Q231	D – 8
Q232	D – 10
Q234	D – 9
Q235	E – 10
Q236	D – 9
Q501	C – 5
Q502	E – 6
Q503	E – 6
Q504	B – 5
Q505	E – 4
Q506	E – 5
Q507	E – 4
Q508	E – 5
Q509	F – 4
Q510	F – 2
Q511	C – 5
Q1003	D – 12
Q1004	G – 13

DIODE	
D201	C – 8
D202	C – 8
D220	D – 6
D221	C – 6
D231	D – 9
D232	D – 10
D262	A – 12
D263	A – 11
D264	A – 12
D501	C – 4
D502	B – 4
D504	C – 5
D505	G – 5
D506	G – 3
D507	F – 1
D509	C – 2
D510	C – 3
D511	G – 5
D1001	B – 12



A BOARD TRANSISTOR VOLTAGE LIST

	E	C	B
Q220	GND	0	2.8
Q221	2.8	2.8	2.2
Q222	GND	0	2.8
Q223	11.9	2.8	11.1
Q230	GND	0	0.7
Q231	0	10.6	0
Q232	GND	9.0	0
Q234	0	9.0	0
Q235	9.0	0	9.0
Q236	GND	4.6	0
Q501	3.2	0	4.1
Q502	6.9	0.9	6.4
Q503	3.1	6.9	3.7
Q504	GND	4.9	0
Q505	GND	63.7	−0.7
Q506	2.1	−54.0	1.6
Q507	−124.3	−137.3	−121.6
Q508	2.1	−121.6	1.7
Q509	−122.9	−137.3	−123.2
Q510	−122.9	*	−123.5
Q511	1.6	GND	0.9
Q1003	5.6	GND	5.1
Q1004	GND	0	0

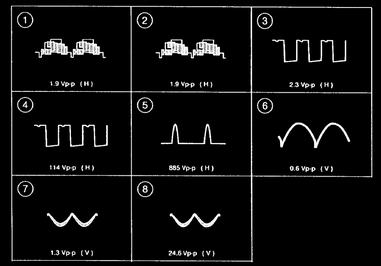
* : MEASUREMENT IMPOSSIBILTY

A BOARD IC VOLTAGE LIST

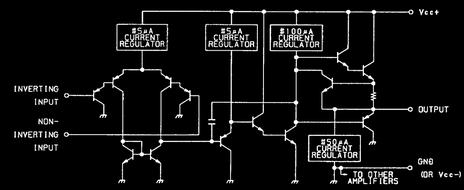
ALL VOLTAGES ARE IN V

IC201	1	6.1	3	6.1	5	6.1	7	6.1
	2	6.1	4	GND	6	6.1	8	12.0
IC202	1	6.0	5	GND	9	6.1	13	6.1	17	NC
	2	12.0	6	6.1	10	GND	14	6.1	18	NC
	3	6.0	7	6.1	11	4.6	15	6.1	19	NC
	4	12.0	8	6.1	12	4.6	16	6.1	20	NC
IC230	1	−16.3	4	0	7	0	10	0		
	2	0	5	10.8	8	0	11	0		
	3	15.0	6	−16.3	9	GND				
IC262	1	11.0	2	9.0	3	GND	4	11.0		
IC263	1	7.0	2	5.0	3	GND	4	7.0		
IC264	1	15.0	2	GND	3	12.0				

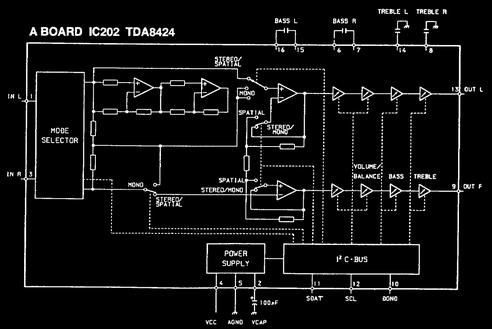
• A BOARD WAVEFORMS



A BOARD IC201 LM358P



A BOARD IC202 TDA8424



D BOARD IC VOLTAGE LIST

ALL VOLTAGES ARE IN V

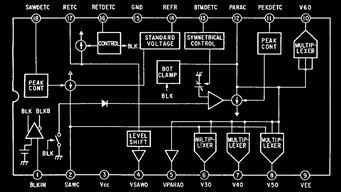
IC1501	1	1.5	3	-13.8	5	0.3	7	1.5	
	2	15.0	4	-15.0	6	15.0			
IC1601	1	-13.3	6	0.4	11	14.2	16	-15.0	21	0
	2	-13.3	7	0.4	12	-14.3	17	-15.0	22	0
	3	-13.3	8	GND	13	-14.3	18	15.0		
	4	0	9	0	14	14.2	19	-15.0		
	5	0	10	0	15	15.0	20	0		
IC1602	1	-13.3	6	-0.1	11	14.2	16	-15.0	21	-0.9
	2	-13.3	7	-0.1	12	-14.2	17	-15.0	22	0.3
	3	-13.3	8	GND	13	-14.3	18	15.0		
	4	0.2	9	-0.5	14	14.2	19	-15.0		
	5	0.2	10	-0.5	15	15.0	20	-0.2		
IC1701	1	NC	15	NC	29	NC	43	0	57	NC
	2	NC	16	NC	30	0.7	44	0	58	NC
	3	NC	17	NC	31	0.3	45	NC	59	NC
	4	NC	18	NC	32	GND	46	GND	60	NC
	5	NC	19	NC	33	NC	47	GND	61	GND
	6	NC	20	NC	34	2.7	48	GND	62	GND
	7	NC	21	5.1	35	2.5	49	NC	63	5.0
	8	NC	22	NC	36	5.2	50	NC	64	5.0
	9	NC	23	NC	37	NC	51	NC		
	10	NC	24	3.2	38	NC	52	NC		
	11	NC	25	NC	39	0	53	NC		
	12	NC	26	NC	40	0	54	4.7		
	13	NC	27	NC	41	0	55	NC		
	14	NC	28	NC	42	0	56	4.6		
IC1702	1	5.2	2	5.0	3	GND				
IC1801	1	0	10	3.4	19	0	28	0	37	0
	2	-0.9	11	5.1	20	-0.6	29	0	38	0
	3	0	12	0.7	21	5.0	30	0	39	0
	4	-1.1	13	3.2	22	0	31	3.2	40	0.2
	5	0	14	-2.1	23	1.5	32	0.7	41	0
	6	-0.4	15	0	24	0	33	5.2	42	GND
	7	GND	16	-0.9	25	0	34	3.4		
	8	5.2	17	0	26	0	35	0		
	9	-5.0	18	-0.9	27	0	36	0		
IC1802	1	0.8	5	-0.9	9	-5.0	13	0.4	17	1.3
	2	1.2	6	0	10	0.3	14	1.3	18	-1.6
	3	5.0	7	-1.1	11	0.6	15	GND		
	4	0	8	0	12	-0.9	16	-1.7		

IC1803	1	-5.0	2	-15.0	3	GND			
IC1804	1	5.0	2	GND	3	15.0			
IC1805	1	0	10	3.4	19	0	28	0	37	0
	2	-0.9	11	5.2	20	-0.5	29	0	38	0
	3	0.2	12	0.7	21	5.0	30	1.1	39	0
	4	-1.1	13	3.2	22	0	31	3.2	40	-0.5
	5	0	14	-2.1	23	0	32	0.7	41	-0.1
	6	-0.4	15	0	24	0	33	5.1	42	GND
	7	5.1	16	-0.9	25	0.4	34	3.4		
	8	5.2	17	0	26	0	35	0		
	9	-5.0	18	-0.9	27	0	36	0		
IC1806	1	0.2	5	-0.9	9	-5.0	13	0.4	17	1.3
	2	1.3	6	0	10	0.3	14	1.3	18	-1.6
	3	5.0	7	-1.0	11	0.6	15	GND		
	4	0	8	0	12	-0.9	16	-1.5		
IC1807	1	-12.0	2	-15.0	3	GND				
IC1808	1	12.0	2	GND	3	15.0				
IC1809	1	0	10	3.4	19	0	28	0	37	0
	2	-0.9	11	5.1	20	-0.5	29	0	38	0
	3	0.2	12	0.7	21	5.0	30	0.4	39	0
	4	-1.1	13	3.2	22	0	31	NC	40	0.4
	5	0	14	-2.2	23	-0.7	32	NC	41	0
	6	-0.4	15	0	24	0	33	NC	42	GND
	7	-5.0	16	-0.9	25	0	34	NC		
	8	5.1	17	0	26	0	35	0		
	9	-5.0	18	-0.9	27	0	36	0		
IC1931	1	0	4	12.0	7	0.4	10	NC	13	0
	2	0	5	0	8	NC	11	-12.0	14	0
	3	0	6	0	9	NC	12	GND		
IC1932	1	0.7	4	12.0	7	-0.7	10	0	13	0
	2	0	5	GND	8	0	11	-12.0	14	0
	3	GND	6	0	9	0	12	0		

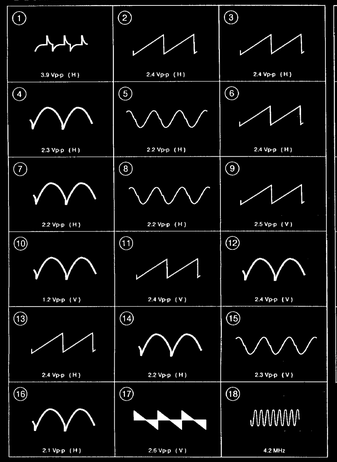
D BOARD TRANSISTOR VOLTAGE LIST

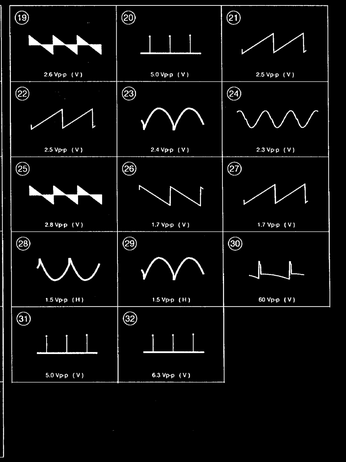
	E	C	B
Q1501	0.2	5.0	-0.5
Q1551	4.0	2.1	3.4
Q1552	1.5	12.0	2.1
Q1701	GND	3.5	0.3
Q1801	2.6	5.0	3.2
Q1802	-2.5	-5.0	-3.1
Q1803	GND	4.8	0
Q1804	-0.3	0	-0.9
Q1805	GND	4.8	0

D BOARD IC1802 PA0053B



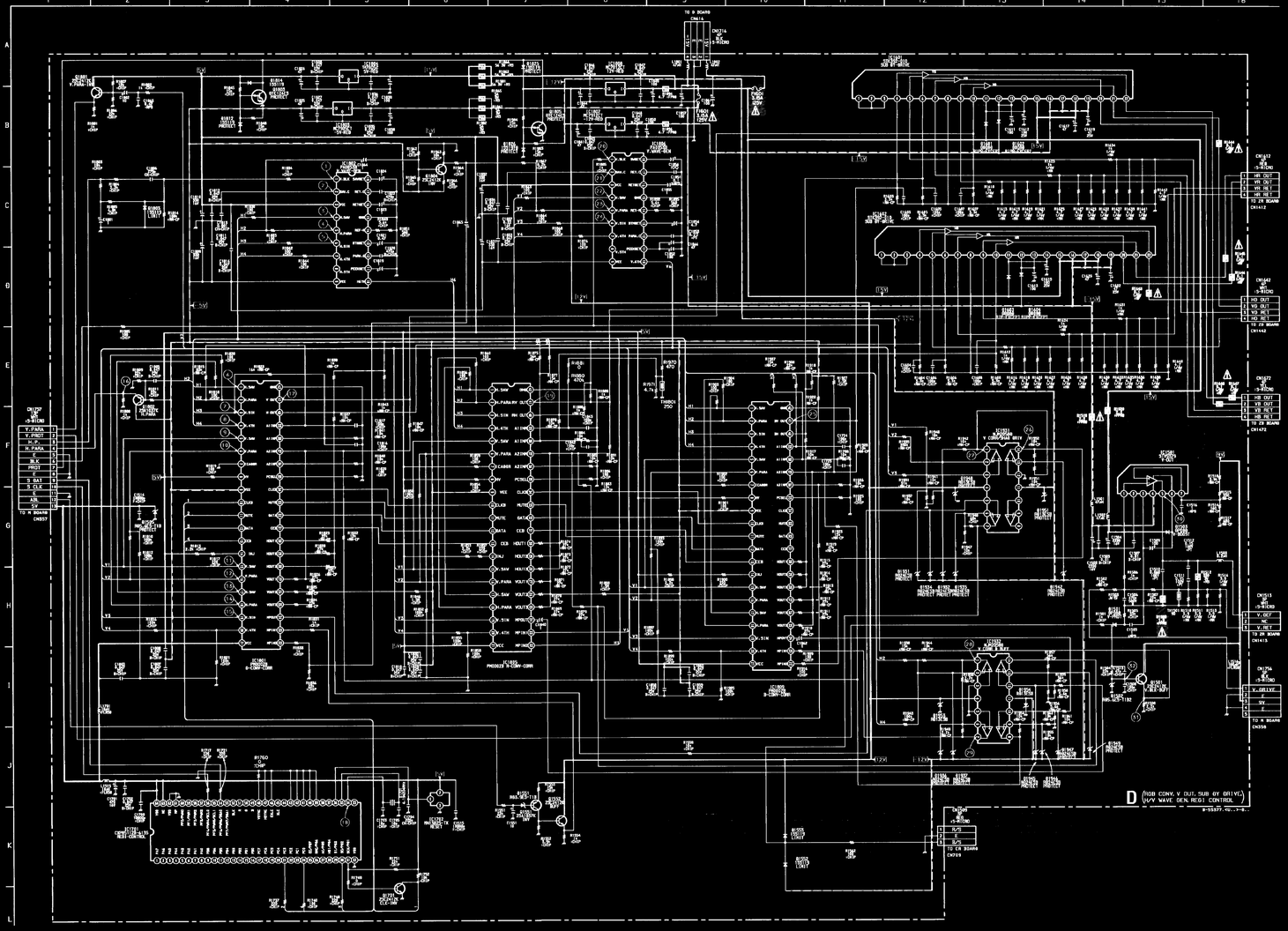
· D BOARD WAVEFORMS





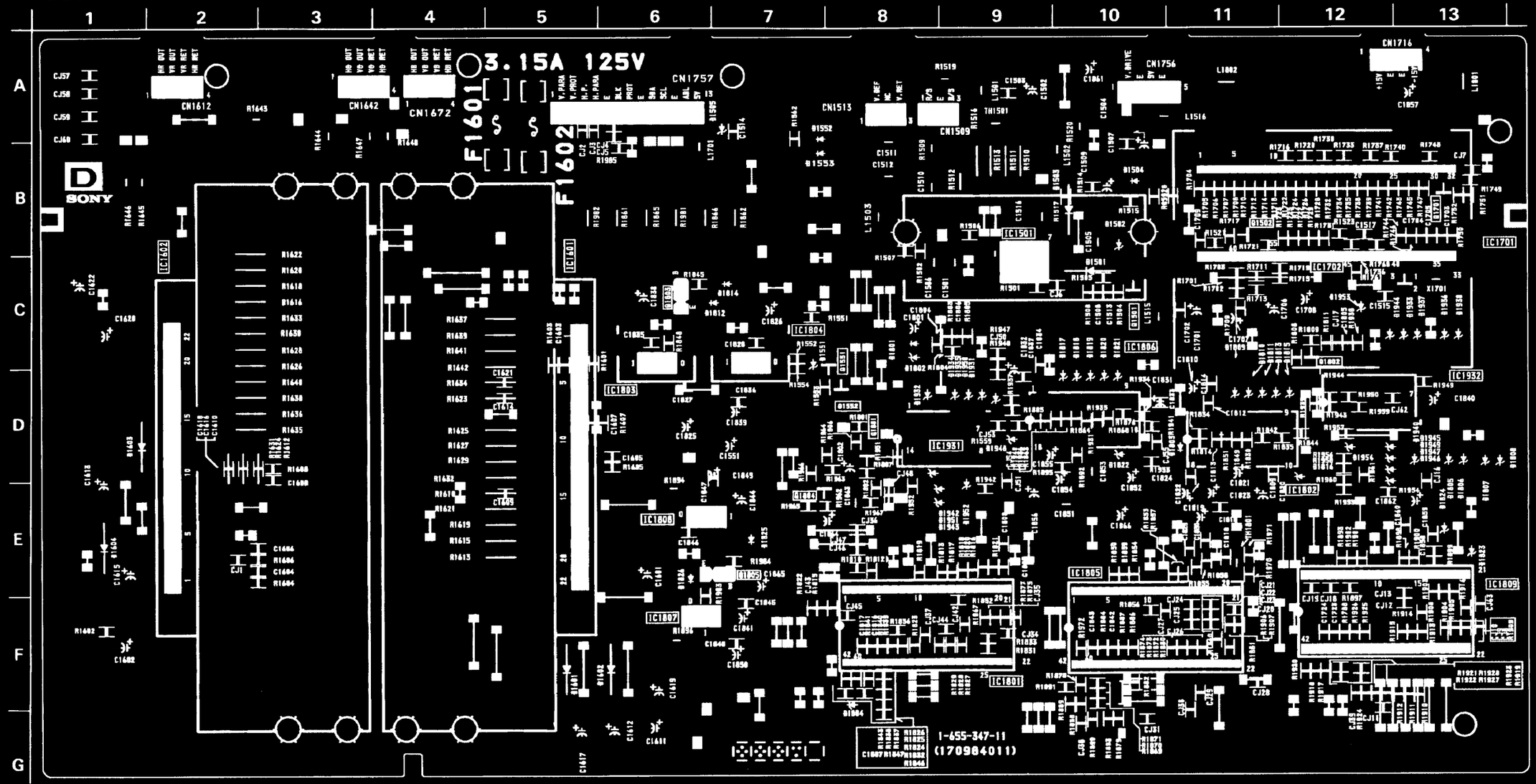
Schematic diagrams ← A board

Schematic diagrams D board →



D [RGB CONV, V OUT, SUB DY DRIVE, H/V WAVE GEN, REGI CONTROL]

– D BOARD –

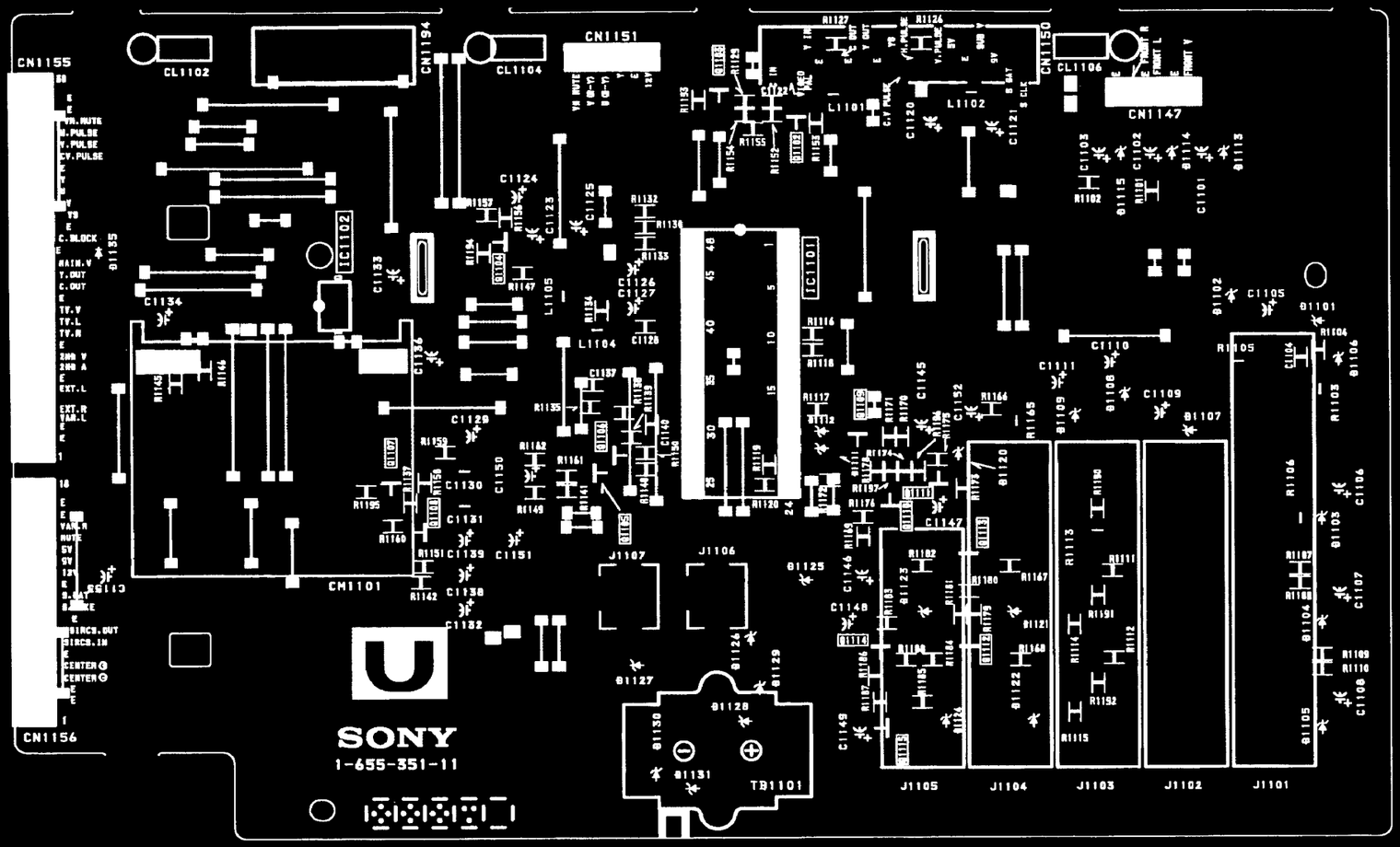


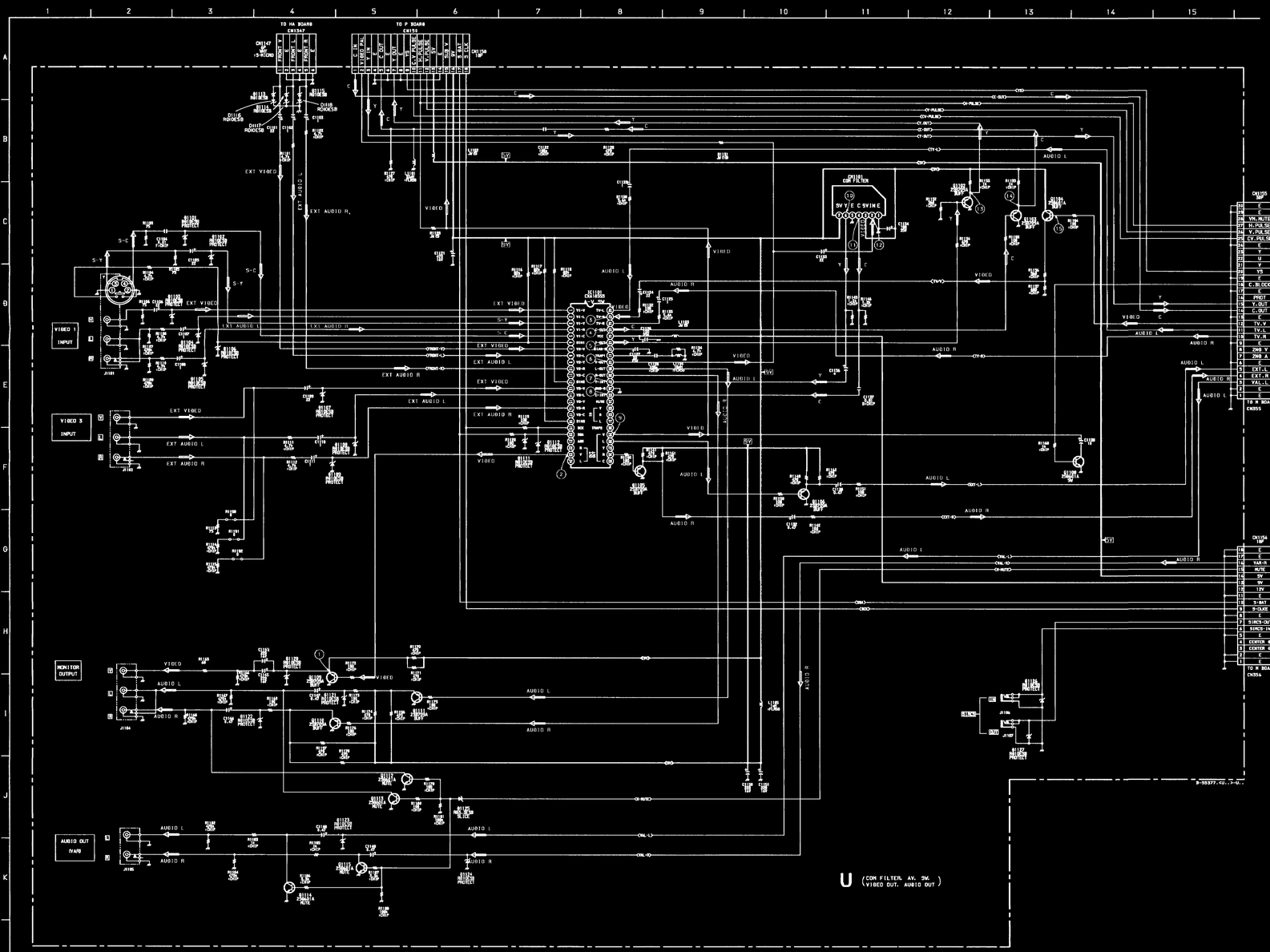
D BOARD

IC		IC1807	F – 7	Q1802	C – 12	D1601	F – 5	D1935	D – 9
IC1501	C – 9	IC1808	E – 7	Q1803	C – 6	D1602	F – 6	D1936	C – 13
IC1601	C – 5	IC1809	F – 12	Q1804	E – 8	D1603	D – 2	D1937	C – 13
IC1602	D – 2	IC1931	D – 9	Q1805	E – 7	D1604	E – 1	D1942	E – 9
IC1701	B – 12	IC1932	D – 13	DIODE		D1803	D – 11	D1945	D – 13
IC1702	C – 12	TRANSISTOR		D1501	C – 10	D1812	C – 7	D1946	E – 13
IC1801	F – 9	Q1501	C – 10	D1502	B – 10	D1814	C – 7	D1947	E – 13
IC1802	D – 12	Q1502	B – 11	D1503	B – 10	D1825	E – 7	D1948	D – 9
IC1803	D – 6	Q1551	D – 8	D1505	A – 6	D1826	E – 6	D1949	D – 13
IC1804	D – 7	Q1552	D – 8	D1551	D – 8	D1827		D1951	E – 9
IC1805	F – 10	Q1701	B – 13	D1552	B – 8	D1931	D – 9	D1953	C – 12
IC1806	D – 10	Q1801	D – 8	D1553	B – 8	D1932	D – 9	D1954	D – 12
						D1934	D – 9		

U [COM FILTER, AV, SW, VIDEO OUT, AUDIO OUT]

– U BOARD –





U BOARD IC VOLTAGE LIST

ALL VOLTAGES ARE IN V

CM1101	1 GND	3 9.0	5 GND	7 9.0			
	2 5.4	4 5.3	6 5.3				
IC1101	1 4.7	11 NC	21 NC	31 4.7	41 4.7		
	2 4.7	12 5.0	22 NC	32 4.7	42 4.7		
	3 4.7	13 4.7	23 4.6	33 4.7	43 4.4		
	4 4.7	14 4.7	24 NC	34 NC	44 9.0		
	5 4.7	15 NC	25 NC	35 4.7	45 4.7		
	6 5.0	16 4.7	26 4.8	36 GND	46 4.7		
	7 3.6	17 NC	27 NC	37 4.7	47 4.7		
	8 4.7	18 5.0	28 4.8	38 4.8	48 4.7		
	9 NC	19 4.6	29 4.6	39 4.8			
	10 4.7	20 4.6	30 4.7	40 4.6			

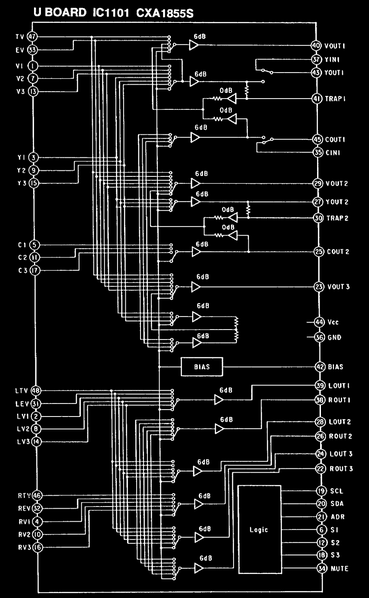
U BOARD TRANSISTOR VOLTAGE LIST

	E	C	B
Q1102	3.1	GND	2.5
Q1103	5.3	GND	4.7
Q1104	5.1	9.0	5.8
Q1105	5.4	GND	4.8
Q1106	5.4	GND	4.8
Q1107	0	9.0	-0.3
Q1108	GND	0.9	-1.1
Q1109	5.3	GND	4.6
Q1110	5.4	GND	4.8
Q1111	5.4	GND	4.8
Q1112	GND	0	0
Q1113	GND	0	0
Q1114	GND	0	0
Q1115	GND	0	0

• U BOARD WAVEFORMS

① 1.9 Vp-p (H)	② 1.9 Vp-p (H)	③ 1.0 Vp-p (H)
④ 1.9 Vp-p (H)	⑤ 1.7 Vp-p (H)	⑥ 1.9 Vp-p (H)
⑦ 1.8 Vp-p (H)	⑧ 1.8 Vp-p (H)	⑨ 1.9 Vp-p (H)
⑩ 1.9 Vp-p (H)	⑪ 1.8 Vp-p (H)	⑫ 1.9 Vp-p (H)
⑬ 1.0 Vp-p (H)	⑭ 1.8 Vp-p (H)	⑮ 1.8 Vp-p (H)

U BOARD IC1101 CXA1855S



M BOARD IC VOLTAGE LIST

ALL VOLTAGES ARE IN V

IC					
IC001	1 12.0	2 GND	3 5.0		
IC002	1 0.8	15 0	29 0	43 5.1	57 3.2
	2 0.2	16 0	30 5.0	44 5.1	58 GND
	3 4.8	17 0	31 5.0	45 3.0	59 GND
	4 4.5	18 5.1	32 GND	46 3.0	60 GND
	5 0	19 0	33 0	47 0	61 GND
	6 5.2	20 0	34 2.6	48 0	62 GND
	7 5.1	21 0	35 2.3	49 0	63 5.0
	8 0	22 0	36 5.1	50 NC	64 5.0
	9 0	23 0	37 0	51 0	
	10 5.1	24 0	38 5.1	52 0	
	11 0	25 0	39 2.3	53 4.6	
	12 0	26 5.1	40 GND	54 4.6	
	13 0	27 5.1	41 5.1	55 4.6	
	14 0	28 0	42 5.1	56 4.6	
IC003	1 GND	3 GND	5 4.6	7 GND	
	2 GND	4 GND	6 4.6	8 5.0	
IC004	1 0	5 0	9 GND	13 2.2	17 5.0
	2 5.0	6 0	10 GND	14 5.0	18 5.0
	3 0	7 0	11 1.8	15 5.0	
	4 NC	8 0.9	12 1.7	16 GND	
IC005	1 GND	3 GND	5 4.6	7 GND	
	2 5.1	4 GND	6 4.6	8 5.0	
IC006	1 5.1	2 5.2	3 GND		
IC301	1 4.4	11 0	21 0	31 3.7	41 3.4
	2 7.4	12 5.0	22 1.7	32 3.0	42 3.6
	3 5.4	13 5.7	23 1.7	33 3.7	43 3.0
	4 GND	14 5.7	24 1.6	34 GND	44 GND
	5 4.1	15 GND	25 5.4	35 4.7	45 3.6
	6 5.5	16 6.0	26 NC	36 5.1	46 9.0
	7 2.5	17 6.0	27 *	37 4.0	47 4.6
	8 9.0	18 6.0	28 8.9	38 GND	48 4.6
	9 0	19 6.0	29 NC	39 2.5	
	10 0	20 0	30 3.0	40 4.3	
IC302	1 5.0	2 GND	3 9.0		

* : MEASUREMENT IMPOSSIBILTY

M BOARD TRANSISTOR VOLTAGE LIST

	E	C	B
Q001	5.0	0.8	5.3
Q002	0	5.0	0.7
Q003	0	5.0	0
Q004	0.7	GND	0
Q005	3.4	5.0	4.2
Q006	0	5.2	0.7
Q007	5.2	0	5.1
Q008	0	0	5.1
Q009	GND	5.2	0
Q010	0	0	5.1
Q011	5.2	5.1	4.8
Q012	GND	5.0	0
Q017	9.0	5.3	5.7
Q018	5.0	5.0	4.4
Q019	GND	0.2	0.7
Q301	2.7	GND	4.1
Q302	2.6	GND	1.9
Q303	2.6	GND	1.9
Q304	2.6	GND	1.9
Q305	GND	8.9	0
Q307	GND	0	0.7
Q308	3.1	GND	2.3
Q309	4.0	GND	3.4
Q310	6.8	9.0	7.4
Q311	5.4	9.0	6.1
Q312	1.5	7.6	2.2
Q313	0.9	9.0	0.4
Q314	0.9	6.0	1.5
Q315	5.3	9.0	6.0
Q316	0	9.0	0
Q317	8.2	3.7	7.6
Q318	0.7	5.9	1.4
Q319	GND	0.3	0
Q320	1.2	6.1	1.8
Q321	5.4	9.0	6.1
Q322	2.5	9.0	3.2

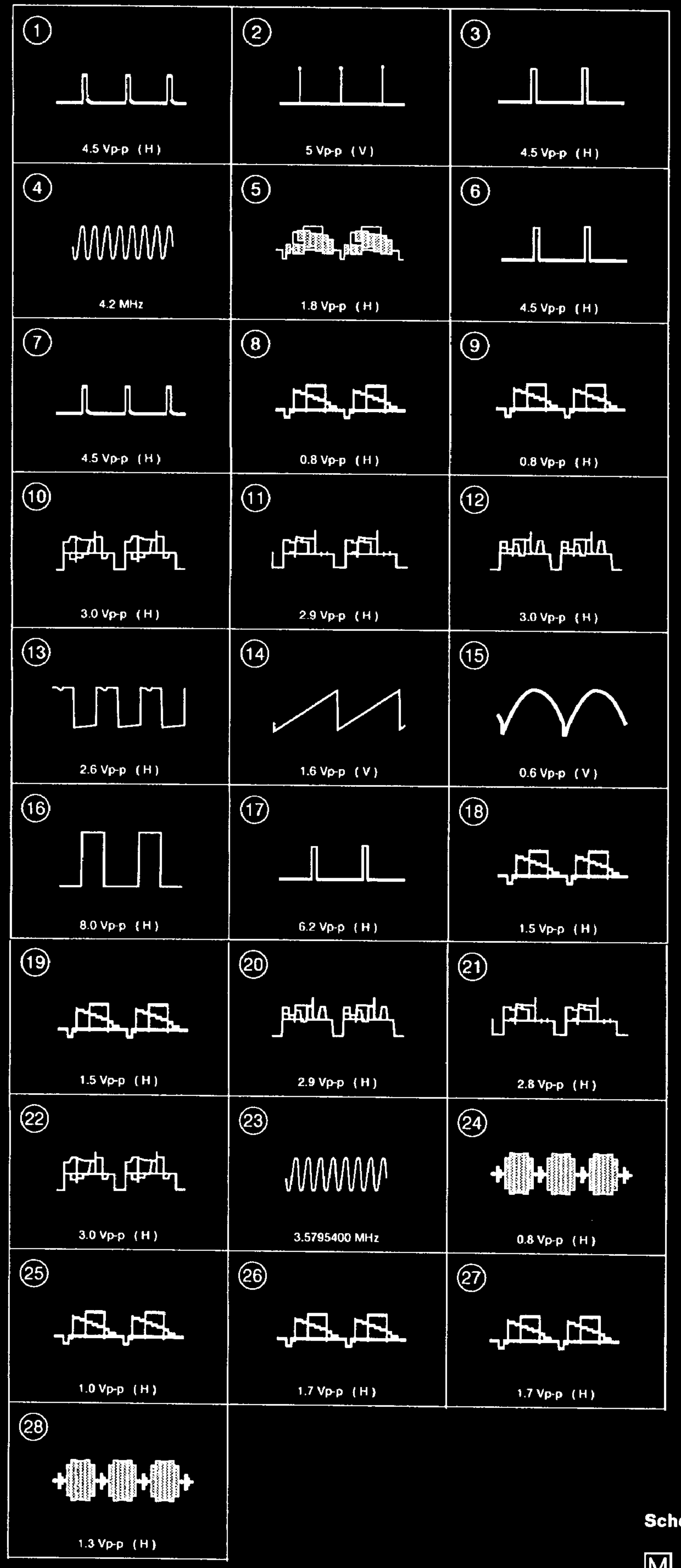
M BOARD ∗ MARK

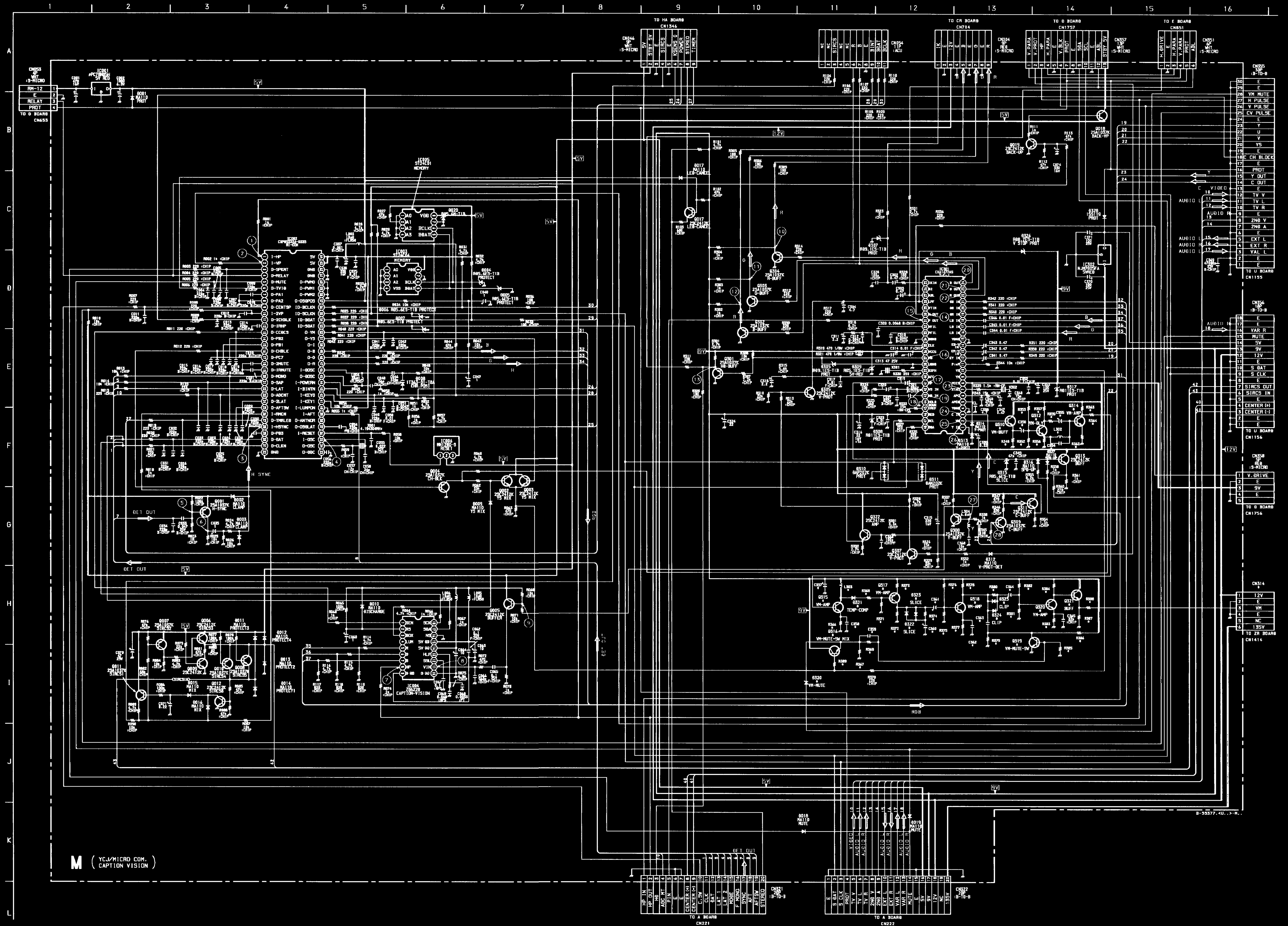
Ref.No.	KP-41T15(U/C)	KP-46S15(U/C)	KP-53S15(U/C)
C350	10 50V	–	–
C354	22p	–	–
C355	22 50V	–	–
C357	47 25V	–	–
C358	15p	–	–
C359	220p	–	–
C360	10 50V	–	–
C361	10 50V	–	–
C362	22p	–	–
C363	0.001	–	–
C364	10 50V	–	–
CN314	6P	–	–
D320	MA110	–	–
D321	MA110	–	–
D322	MA110	–	–
D323	MA110	–	–
D324	MA110	–	–
D325	MA110	–	–
L302	22μH	–	–
L303	39μH	–	–
Q310	2SC2412K	–	–
Q312	2SC2412K	–	–
Q314	2SC2412K	–	–
Q315	2SC2412K	–	–
Q316	2SC2412K	–	–
Q317	2SC2412K	–	–
Q318	2SC2412K	–	–
Q319	2SC2412K	–	–
Q320	2SC2412K	–	–
Q321	2SC2412K	–	–
R348	1k	–	–
R352	2.2k	–	–
R353	6.8k	–	–
R356	180	–	–
R357	180	–	–
R359	330	–	–
R362	270	–	–
R363	1k	–	–
R364	100	–	–
R366	1.5k	–	–
R367	2.2k	–	–
R368	100	–	–
R369	3.3k	–	–
R371	1k	–	–

Ref.No.	KP-41T15(U/C)	KP-46S15(U/C)	KP-53S15(U/C)
R372	1.2k	–	–
R373	270	–	–
R374	33k	–	–
R375	12k	–	–
R376	68k	–	–
R377	560	–	–
R378	2.7k	–	–
R379	27k	–	–
R380	100k	–	–
R381	8.2k	–	–
R382	33k	–	–
R383	560	–	–
R384	1.5k	–	–
R385	33k	–	–
R386	1M	–	–
R387	1k	–	–
R388	0	–	–
R389	220	–	–

– : NOT MOUNT

• M BOARD WAVEFORMS





SPECIFICATIONS

Projection system: 3 picture tubes, 3 lenses, horizontal in-line system

Picture tube: 7 inch high-brightness monochrome tubes (6.3 rester size), with optical coupling and liquid cooling system

Projection lenses: High performance, large-diameter hybrid lens F1.0

Screen size (measured diagonally)

KP-41T15	41 inches
KP-46S15	46 inches
KP-53S15	53 inches

Screen brightness

KP-41T15	1900 cd/m²
KP-46S15	1500 cd/m²
KP-53S15	1200 cd/m²

Television system: American TV standards

Channel coverage: VHF : 2-13 / UHF : 14-69 / CATV : 1-125

Antenna: 75 ohm external antenna terminal for VHF/UHF

Inputs/output:
VIDEO IN 1
S VIDEO IN (4-pin mini DIN) :
Y : 1 Vp-p, 75-ohms
unbalanced, sync negative
C : 0.286 Vp-p (Burst signal) 75 ohms
VIDEO (phone jack) :
1 Vp-p, 75-ohms
unbalanced, sync negative
AUDIO (phone jacks) :
500 mVrms (100% modulation)
Impedance : 47 kilohms
VIDEO INPUT 2 and VIDEO IN 3
VIDEO (phone jacks) :
1 Vp-p, 75-ohms
unbalanced, sync negative
AUDIO (phone jacks) :
500 mVrms (100% modulation)
Impedance : 47 kilohms
MONITOR OUT
VIDEO (phone jack) :
1 Vp-p, 75-ohms
unbalanced, sync negative
AUDIO (phone jacks) :
500 mVrms (100% modulation)
Impedance : 10 kilohms
AUDIO OUT (phono jacks) :
900 mVrms (100% modulation)
Impedance : 5 kilohms

Speaker: Full range speaker
100 mm (3.9 inches) diameter

Speaker output: 7 W x 2

Power requirement: 120 V, 60 Hz

Power consumption: 220 W
Standby mode : 4 W

	Dimensions (W/H/D)	Mass
KP-41T15	950 x 1,000 x 588 mm	51 kg
	(37 1/2 x 39 3/8 x 23 1/4 inches)	(112 lbs 7 oz)
KP-46S15	1,066 x 1,306 x 543 mm	70 kg
	(41 3/4 x 51 1/2 x 21 1/2 inches)	(154 lbs 5 oz)
KP-53S15	1,218 x 1,413 x 594 mm	75 kg
	(48 x 55 3/4 x 23 1/2 inches)	(165 lbs 6 oz)

Supplied accessories:
Remote commander RM-Y118 (1)
Size AA (R6) battery (1)

Optional accessories:
U/V mixer EAC-66
Connecting cables RK-74A, VMC-810S/820S, YC-15V/30V, VMC-720M
Video tray SU-PJT2 (For KP-46S15, KP-53S15)
Stand SU-41X1 (For KP-41T15)
Contrast screen
SCN-41T1 (For KP-41T15)
SCN-46X1 (For KP-46S15)
SCN-53X1 (For KP-53S15)

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT

(US model only)

After correcting the original service problem, perfom the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recom mend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate;be suspicious of your HV meter if sets always have low HV.
9. Check the antenna temminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to usc these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground;the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

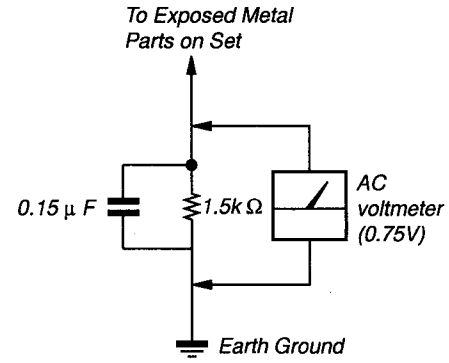


Fig. A. Using an AC voltmeter to check AC leakage.

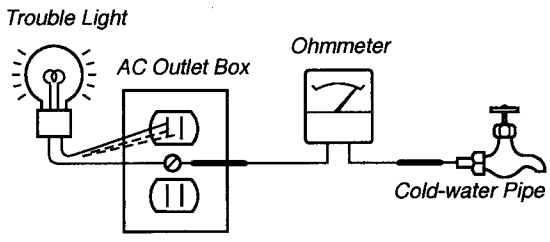


Fig. B. Checking for earth ground.

TABLE OF CONTENTS

Section	Title	Page
1. GENERAL		
	Step 1 : Installing the projection TV	5
	Step 2 : Connections	5
	Step 3 : Setting up the remote commander	8
	Step 4 : Setting up the projection TV automatically (AUTO SET UP)	8
	Listening to surround sound (SURROUND)	10
	Selecting stereo or bilingual programs (MTS)	10
	Setting daylight saving time (DAYLIGHT SAVING)	11
	Setting the clock (CURRENT TIME SET)	11
	Setting the timer to turn the projection TV on and off (ON/OFF TIMER)	12
	Blocking out a channel (CHANNEL BLOCK)	12
	Customizing the channel number buttons (CH CAPTION/GUIDE)	13
	Setting video labels (VIDEO LABEL)	13
	Displaying Caption Vision (CAPTION VISION/XDS)	14
	Operating video equipment	14
	Operating a cable box	15
2. DISASSEMBLY		
2-1-1.	REAR PLATE REMOVAL (KP-41T15)	16
2-1-2.	REAR PLATE REMOVAL (KP-46S15/53S15)	16
2-2.	CHASSIS ASSY REMOVAL	16
2-3.	SERVICE POSITION	16
2-4.	G BOARD REMOVAL	17
2-5.	D BOARD REMOVAL	17
2-6.	U BOARD REMOVAL	17
2-7.	M BOARD REMOVAL	17
2-8-1.	HA BOARD REMOVAL (KP-41T15)	18
2-8-2.	HA BOARD REMOVAL (KP-46S15/53S15)	18
2-9-1.	BEZNET REMOVAL (KP-41T15)	18
2-9-2.	BEZNET REMOVAL (KP-46S15/53S15)	18
2-10-1.	MIRROR COVER REMOVAL (KP-41T15)	19
2-10-2.	MIRROR COVER REMOVAL (KP-46S15/53S15)	19
2-11.	HIGH-VOLTAGE CABLE INSTALLATION AND REMOVAL	19
2-12.	PICTURE TUBE REMOVAL	19
3. SAFETY RELATED ADJUSTMENTS		20
4. DIAGRAMS		
4-1.	Block Diagrams (1)	26
	Block Diagrams (2)	31
4-2.	Circuit Boards Location	37
4-3.	Printed Wiring Board and Schamatic Diagrams	37
	• A Board	41
	• D Board	45
	• U Board	53
	• M Board	57
	• P Board	65
	• HA Board	71
	• E Board	72
	• G Board	79
	• ZB Board	82
	• ZG Board	83
	• ZR Board	84
	• CR Board	88
	• CG Board	90
	• CB Board	91
4-4.	Semiconductors	94
5. EXPLODED VIEWS		
5-1.	Cover (KP-41T15)	96
5-2.	Cover (KP-46S15/53S15)	97
5-3.	Chassis	98
5-4.	Picture tube	99
6. ELECTRICAL PARTS LIST		100

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE DELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DEPANNAGE. LE CHÁSSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDÉ Á L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS ÁLA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES CONT D'UNEIMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

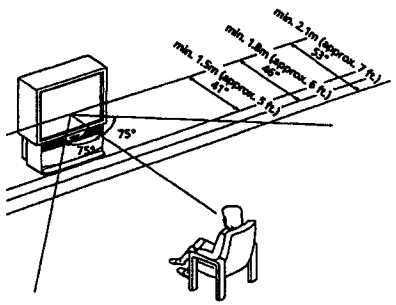
SECTION1
GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.

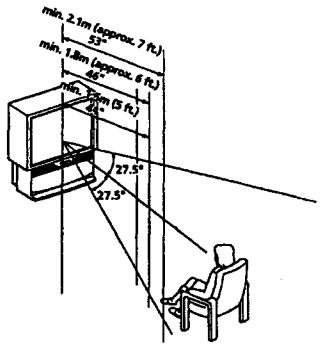
Step 1: Installing the projection TV

For the best picture quality, install the projection TV within the areas shown below.

Optimum viewing area (Horizontal)

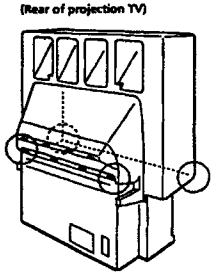


Optimum viewing area (Vertical)



Carrying your projection TV

Be sure to grasp the portions indicated when carrying the projection TV, and to use more than two people.



Preparing for your projection TV

Before you use your projection TV, adjust convergence. For the procedure, see "Step 4: Setting up the projection TV automatically (AUTO SET UP)" on page 12.

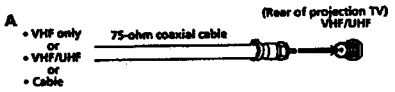
Step 2: Connections

Although you can use either an indoor antenna or outdoor antenna with your projection TV, we recommend connecting to an outdoor antenna or a cable TV system for improved picture quality.

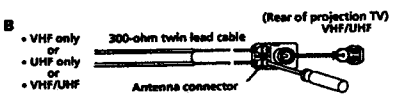
To an antenna

Connect your antenna cable to the VHF/UHF antenna terminal. If you cannot connect your antenna cable directry to the terminal, follow one of the instructions below depending on your cable type.

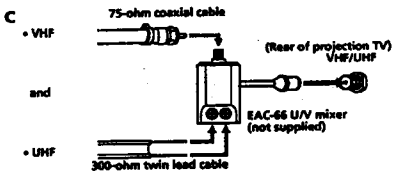
A



B



C



Notes

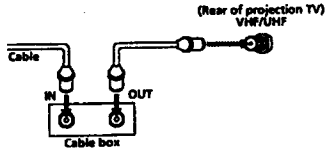
- Most VHF/UHF combination antennas have a signal splitter. Remove the splitter before attaching the appropriate connector.
- If you use the U/V mixer, snow and noise may appear in the picture when viewing cable TV channels over 37(W+1).

Connecting an antenna/cable TV system without a VCR

To cable or antenna

To cable box

If your cable company requires you to connect a cable box, make the connection as follows:



Connecting an antenna/cable TV system with a VCR

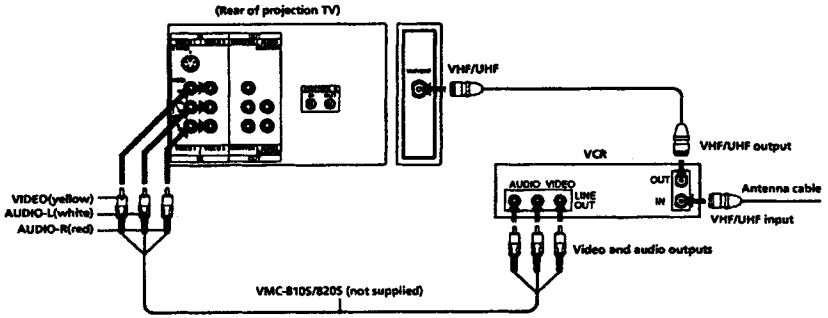
For details on connection, see the instruction manual of your VCR. Before connecting, disconnect the AC power cords of the equipment to be connected.

After making these connections, you will be able to do the following:

- View the playback of video tapes
- Record one TV program while viewing another program
- Watch two TV programs at one time using a window picture (Picture-in-Picture)

To a conventional VCR

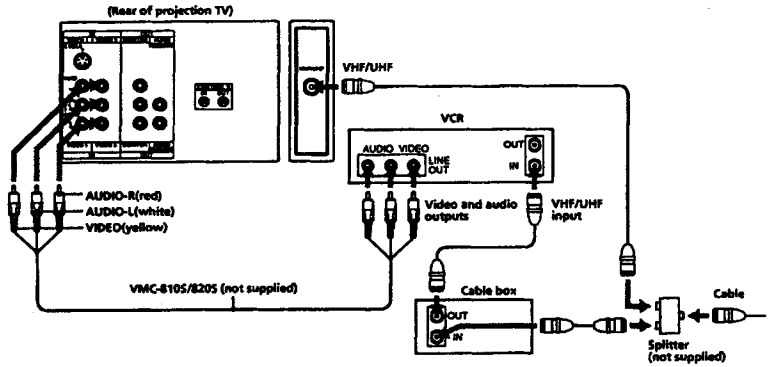
Without a cable box



Note

- To connect a monaural VCR, connect the audio output of the VCR to AUDIO-L (MONO) of VIDEO 1/3 IN on the projection TV.
- Do not connect the cable to the S VIDEO connector on the projection TV.

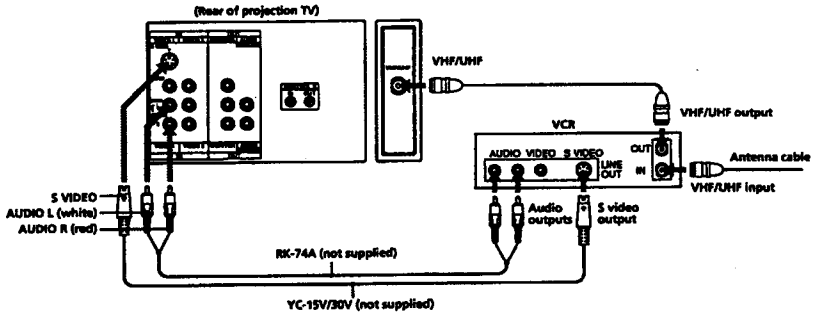
With a cable box



To an S video equipped VCR

If your VCR has an S video output jack, make the connection as follows.
Whenever you connect the cable to the S VIDEO connector, the projection TV automatically receives S video signals.

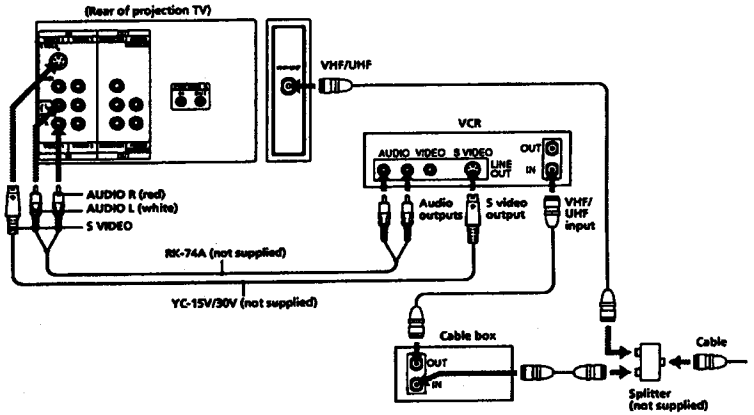
Without a cable box



Note

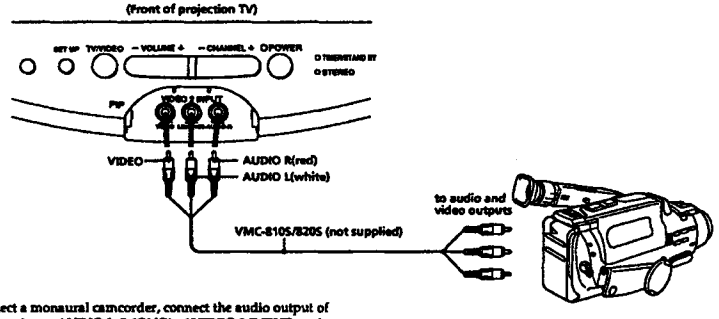
- Video signals are composed of Y (luminance) and C (chroma) signals. The S connection sends the two signals separately preventing degradation, and gives better picture quality compared to conventional connection.

With a cable box



Connecting a camcorder

This connection is convenient for watching the picture from a camcorder.

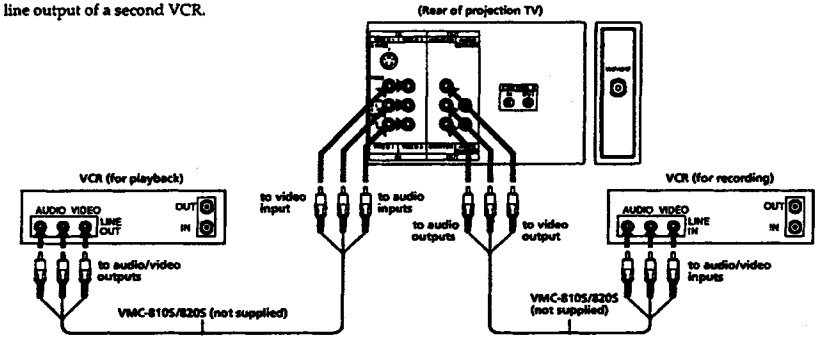


Note

- To connect a monaural camcorder, connect the audio output of the camcorder to AUDIO L (MONO) of VIDEO 2 INPUT on the projection TV.

Connecting two VCRs for tape editing

You can record input images displayed on the screen. This type of connection should be used only when you connect from the line input of one VCR, and from the line output of a second VCR.

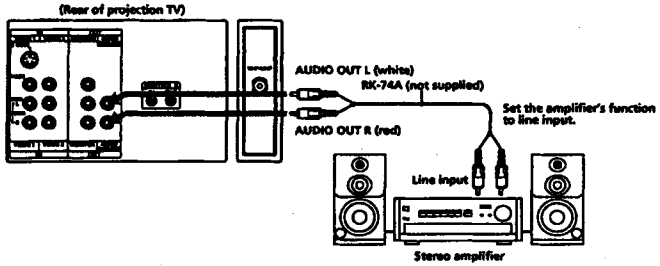


Notes

- Do not change the input signal while editing, or the output signal will also change.
- When connecting a single VCR to the projection TV, do not connect MONITOR OUT to the VCR's line input, while at the same time connecting from the projection TV's VIDEO IN jacks to the VCR's line output.
- You can use the S video connector to connect a VCR for playback and the composite video jack to connect a VCR for recording.

Connecting an audio system

When connecting audio equipment, see page 24 for more information.



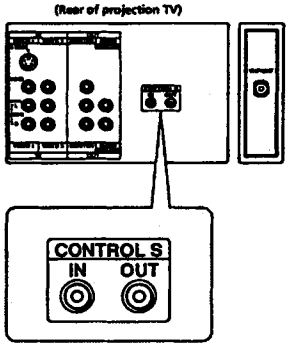
Note

- You can adjust the bass, treble and balance, or select surround or an MTS (Multichannel TV Sound) mode with the supplied remote commander.

Connecting other Sony equipment with CONTROL S jack

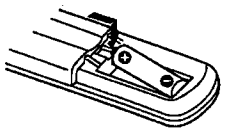
This feature allows you to control your projection TV and other Sony equipment with one remote commander.

- To control other Sony equipment with the projection TV's remote commander, connect the input of the equipment to CONTROL S OUT jack on the projection TV.
- To control the projection TV with the remote commander of other Sony equipment, connect the output of the equipment to CONTROL S IN jack on the projection TV.



Step 3: Setting up the remote commander

Insert one size AA (R6) battery (supplied) by matching the + and – on the battery to the diagram inside the battery compartment.



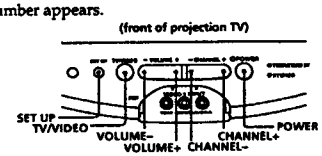
Notes

- With normal use, the battery should last for approximately six months.
- If you do not use the remote commander for an extended period of time, remove the battery to avoid possible damage from battery leakage.
- Do not handle the remote commander roughly. Do not drop it, step on it or let it get wet.
- Do not place the remote commander in direct sunlight, near a heater, or where the humidity is high.

Step 4: Setting up the projection TV automatically (AUTO SET UP)

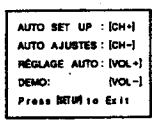
You can set up your projection TV easily by using AUTO SET UP feature. It presets all the receivable channels, adjusts the convergence and changes the on-screen menu language. To set up the TV manually, see "Presetting channels" (page 15), "Setting cable TV on or off" (page 14), "Adjusting convergence" (page 13) and "Changing the menu language" (page 15).

If the TV is set to a video input, you cannot execute AUTO SET UP. Press TV/VIDEO so that a channel number appears.



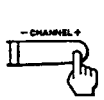
1 Press POWER to turn the projection TV on.

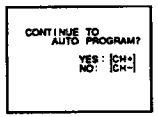
2 Press SET UP on the front of the projection TV.



3 Press CHANNEL+ to start AUTO SET UP.

If you prefer Spanish or French to English, you can change the on-screen menu language. Press CHANNEL – for Spanish or VOLUME+ for French.

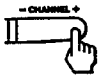




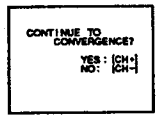
All of the menus will be set to the factory preset condition in the selected language.

(continued)

4 Press CHANNEL+ to preset channels.



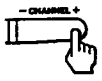
"AUTO PROGRAM" appears on the screen and the TV starts scanning and presetting channels automatically. When all the receivable channels are stored, "AUTO PROGRAM" disappears and the following menu appears. If the projection TV receives cable TV channels, CATV is set to ON automatically.

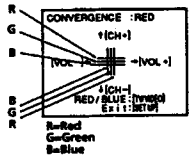


5 Adjust convergence.

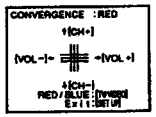
(1) Press CHANNEL+.

The CONVERGENCE adjustment screen appears.

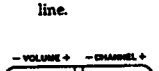


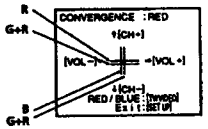


(2) Press TV/VIDEO to select RED or BLUE.



(3) Using CHANNEL+/– or VOLUME+/–, move the line until it converges with the center green line.

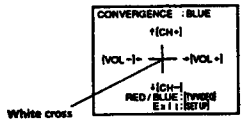




To move horizontal line up/down, press CHANNEL +/–.

To move vertical line right/left, press VOLUME+/–.

(4) Repeat steps (2) and (3) to adjust the other lines until all three lines converge and are seen as a white cross.



Note

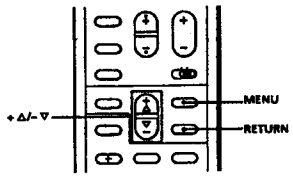
- If more than 90 seconds elapse after you press a button, the menu disappears automatically.

To preview the main functions (DEMO)

Press VOLUME– in step 3. The functions and menus are displayed one by one.

Erasing or adding channels

After AUTO SET UP you can erase unnecessary channels or add the channels you want. Preset channels during the day rather than late at night, when some channels may not be broadcasting.



1 Press MENU.

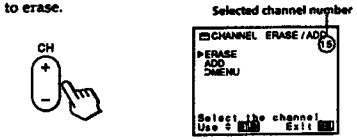
The main menu appears.

2 Press + △ or – ▽ to move the cursor (▶) to SET UP and press RETURN.

The SET UP menu appears.

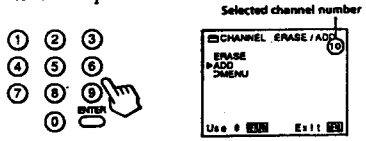
3 Make sure the cursor (▶) is beside CHANNEL ERASE/ADD and press RETURN.
If the cursor is not beside CHANNEL ERASE/ADD, press + △ or – ▽ to move the cursor and press RETURN.
The CHANNEL ERASE/ADD menu appears.

4 Erase and/or add the channel you want:
To erase an unwanted channel
(1) Make sure the cursor (▶) is beside ERASE.
(2) Press CH + or – to select the channel you want to erase.



(3) Press RETURN.
The indication "–" appears beside the channel number, showing that the channel is erased from the preset memory.

To add a channel that you want
(1) Press + △ or – ▽ to select ADD.
(2) Press 0 – 9 button to select the channel you want to add and press ENTER.



(3) Press RETURN.
The indication "+" appears beside the channel number, showing that the channel is added to the preset memory.

5 To erase and/or add other channels, repeat step 4.

6 When you finish, press MENU.

Notes
- If you erase or add a VHF or UHF channel, the cable TV channel with the same number is also erased or added, and vice versa.
- If more than 90 seconds elapse after you press a button, the menu disappears automatically.

Adjusting convergence (CONVERGENCE)

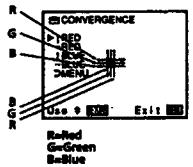
The projection tube image appears on the screen in three layers (red, green and blue). If they do not converge, the color is poor and the picture blurs. To correct this, adjust convergence.
You do not have to do this procedure if you execute AUTO SET UP (page 11). Do this procudure only when you want to adjust it manually.

1 Press MENU.

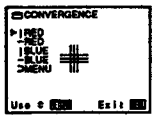
2 Press + △ or – ▽ to move the cursor (▶) to SET UP and press RETURN.

(continued)

3 Press + △ or – ▽ to move the cursor (▶) to CONVERGENCE and press RETURN.
The CONVERGENCE adjustment screen appears.

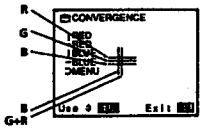


4 Press + △ or – ▽ to move the cursor (▶) to the symbol showing the line you want to adjust, and press RETURN.



| RED : Red vertical line (left/right adjustment)
— RED : Red horizontal line (up/down adjustment)
| BLUE : Blue vertical line (left/right adjustment)
— BLUE : Blue horizontal line (up/down adjustment)

5 Press + △ or – ▽ to move the line until it converges with the center green line, and press RETURN.



To move up/right, press + △.
To move down/left, press – ▽.

6 Repeat steps 4 and 5 to adjust other lines until all three lines converge and are seen as a white cross.

7 Press MENU to return to the original screen.

Setting cable TV on or off

If you have connected the projection TV to a cable TV system, set CABLE to ON, the factory setting. If not, set CABLE to OFF.
You do not have to do this procedure if you execute AUTO SET UP (page 11). Do this procedure only when you want to set it manually.

1 Press MENU.

2 Press + △ or – ▽ to move the cursor (▶) to SET UP and press RETURN.

3 Press + △ or – ▽ to move the cursor (▶) to CABLE and press RETURN.

4 Press + △ or – ▽ to select ON or OFF and press RETURN.

5 Press MENU to return to the original screen.

Note
- If CABLE appears in black, the projection TV is set to a video input and you cannot select CABLE. Press TV on the remote commander so that a channel number appears.

Presetting channels

You can preset TV channels easily by AUTO PROGRAM feature.
You do not have to do this procedure if you execute AUTO SET UP (page 11). Do this procedure only when you want to set it manually.

1 Press MENU.

2 Press + △ or – ▽ to move the cursor (▶) to SET UP and press RETURN.

3 Press + △ or – ▽ to move the cursor (▶) to AUTO PROGRAM and press RETURN.

"AUTO PROGRAM" appears on the screen and the projection TV starts scanning and presetting channels automatically. When all the receivable channels are stored, "AUTO PROGRAM" disappears and the lowest numbered channel is displayed.

4 Press MENU to return to the original screen.

Note

- If AUTO PROGRAM appears in black in the SET UP menu, the projection TV is set to a video input and you cannot select AUTO PROGRAM. Press TV/VIDEO or TV on the remote commander so that a channel number appears.

Changing the menu language

If you prefer Spanish or French to English, you can change the menu language.
You do not have to do this procedure if you execute AUTO SET UP (page 11). Do this procedure only when you want to set it manually.

1 Press MENU.

2 Press + △ or – ▽ to move the cursor (▶) to SET UP and press RETURN.

3 Press + △ or – ▽ to move the cursor (▶) to LANGUAGE and press RETURN.

4 Press + △ or – ▽ to select the language and press RETURN.
The menu in selected language appears.

5 Press MENU to return to the original screen.

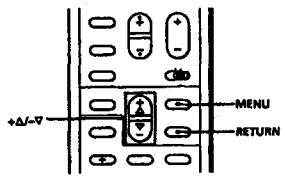
Note

- Even when you select Spanish or French language, certain parts of the menus remain in English.

Listening to surround sound

(SURROUND)

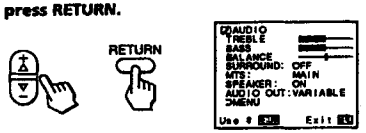
The SURROUND feature simulates sound reproduction with the atmosphere of a movie theater or a concert hall. Surround sound is only effective for stereo programs.



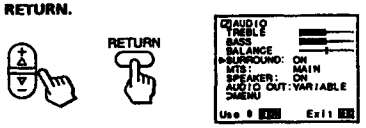
1 Press MENU.

2 Press + △ or – ▽ to select AUDIO and press RETURN.

3 Press + △ or – ▽ to select SURROUND and press RETURN.



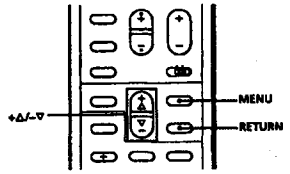
4 Press + △ or – ▽ to select ON and press RETURN.



Selecting stereo or bilingual programs

(MTS)

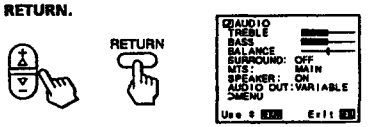
The Multichannel TV Sound (MTS) feature gives you the choice to enjoy stereo sound or Second Audio Programs (SAP) when available. The initial setting is stereo sound (MAIN).



1 Press MENU.

2 Press + △ or – ▽ to select AUDIO and press RETURN.

3 Press + △ or – ▽ to select MTS and press RETURN.



4 Press + △ or – ▽ to select MAIN, SAP or MONO and press RETURN.

Choose	To
MAIN	Listen to stereo sound. The STEREO indicator on the projection TV lights up while a stereo broadcast is received.
SAP	Listen to bilingual programs. The sound of non-SAP programs will be muted when SAP is selected.
MONO	Reduce noise during stereo broadcasts.

Note

- Stereo and SAP sounds are subject to program sources.

Setting daylight saving time (DAYLIGHT SAVING)

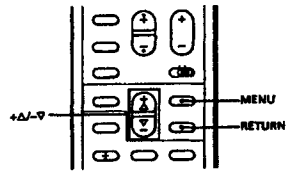
If your area uses daylight saving time, change DAYLIGHT SAVING setting depending on the season, before setting the current time.

Daylight saving start

- After the first Sunday in April, set DAYLIGHT SAVING to YES. Current time (page 26), On/off Timer (page 27) and Channel Block (page 28) settings automatically move one hour ahead.

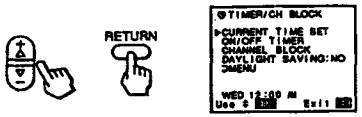
Daylight saving end

- After the last Sunday in October, set DAYLIGHT SAVING to NO. Current time, On/off Timer and Channel Block settings automatically move one hour back.

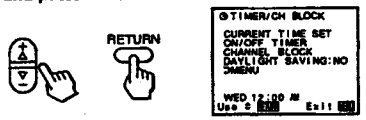


1 Press MENU.

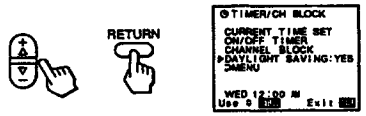
2 Press + Δ or – ∇ to move the cursor (▶) to TIMER/CH BLOCK and press RETURN.



3 Press + Δ or – ∇ to select DAYLIGHT SAVING and press RETURN.



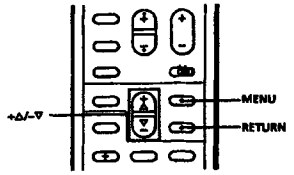
4 Press + Δ or – ∇ to select YES or NO and press RETURN.



Choose	To
YES	Set for daylight saving start
NO	Set for daylight saving end

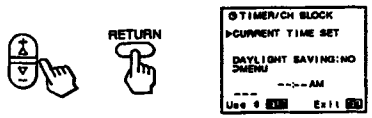
Setting the clock (CURRENT TIME SET)

Set the current time before using On/off Timer (page 27) and Channel Block features (page 28). For example, set the clock to 3:15 p.m., Monday.



1 Press MENU.

2 Press + Δ or – ∇ to select TIMER/CH BLOCK and press RETURN.



If you need to set DAYLIGHT SAVING, follow the procedure on the previous page.

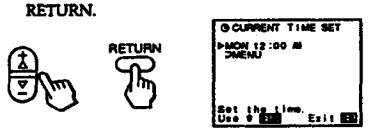
3 Make sure the cursor (▶) is beside CURRENT TIME SET, and press RETURN.

If the cursor is not beside CURRENT TIME SET, press + Δ or – ∇ to move the cursor and press RETURN.

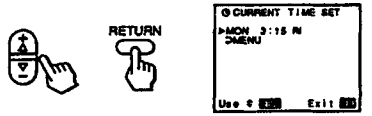
4 Set the current time.

(1) Press RETURN to start setting the time.

(2) Press + Δ or – ∇ to set the day and press RETURN.



(3) Using + Δ or – ∇ and RETURN, set hour and minute in the same way as in step (2). When you press RETURN after setting the minute, the clock starts.



If you make a mistake while setting the time

Press RESET while the CURRENT TIME SET menu is displayed, then repeat step 4.

To display the current time

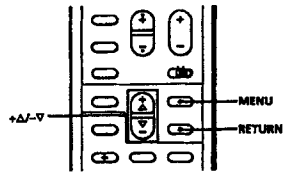
Press DISPLAY.

Note

- If you unplug the projection TV or a power interruption occurs, the clock will be erased. Reset the current time.

Setting the timer to turn the projection TV on and off (ON/OFF TIMER)

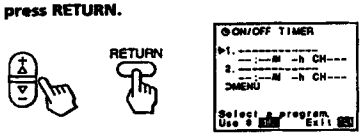
You can set the projection TV to turn on and off at the time you specify. Make sure the clock is set correctly. If it is not, set the clock first.



1 Press MENU.

2 Press + Δ or – ∇ to select TIMER/CH BLOCK and press RETURN.

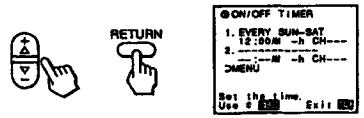
3 Press + Δ or – ∇ to select ON/OFF TIMER and press RETURN.



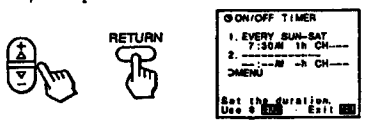
4 Enter the ON/OFF TIMER setting.

(1) Press + Δ or – ∇ to select program 1 or 2 and press RETURN.

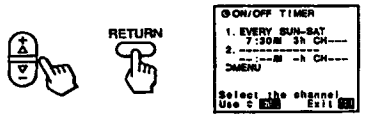
(2) Press + Δ or – ∇ to set the days and press RETURN. Each time you press + Δ or – ∇, the days cycle as shown below.
EVERY SUN–SAT→EVERY MON–FRI→ SUNDAY→MONDAY→...→SATURDAY→ EVERY SUNDAY→EVERY MONDAY → ...→EVERY SATURDAY



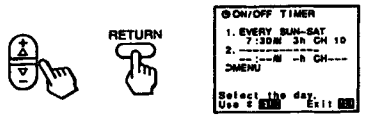
(3) Press + Δ or – ∇ to set the time (hour then minute) that you want to turn on the projection TV and press RETURN.



(4) Press + Δ or – ∇ to set the hour duration and press RETURN.
You can set the hour duration by one hour up to a maximum of six hours.



(5) Press + Δ or – ∇ to select the channel and press RETURN.



The TIMER/STAND BY indicator on the projection TV lights.

5 To set the other program, press RETURN and repeat step 4.

One minute before the projection TV switches to turn off, a message "TV will turn off." is displayed on the screen.

To cancel the timer

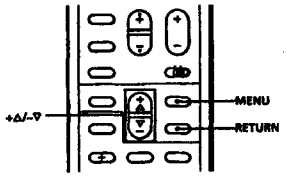
Press RESET on the remote commander.

Note

- If you unplug the projection TV or a power interruption occurs, ON/OFF TIMER settings will be erased. Reset the current time, then set the timer.

Blocking out a channel (CHANNEL BLOCK)

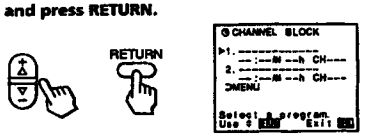
This feature allows you to prevent children from watching unsuitable programs.
Make sure the clock is set correctly. If it is not, set the clock first (page 26).



1 Press MENU.

2 Press + Δ or – ∇ to select TIMER/CH BLOCK and press RETURN.

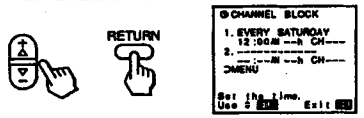
3 Press + Δ or – ∇ to select CHANNEL BLOCK and press RETURN.



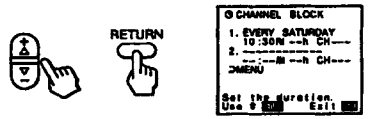
4 Enter a CHANNEL BLOCK setting.

(1) Press + Δ or – ∇ to select program 1 or 2 and press RETURN.

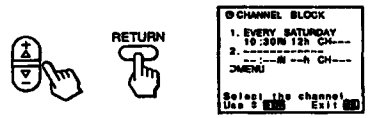
(2) Press + Δ or – ∇ to set the days and press RETURN. Each time you press + Δ or – ∇, the days cycle as shown below.
EVERY SUN–SAT→EVERY MON–FRI→ SUNDAY→MONDAY→...→SATURDAY→ EVERY SUNDAY→EVERY MONDAY→ ...→EVERY SATURDAY



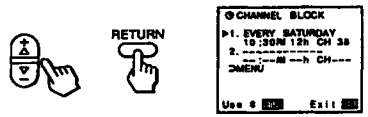
(3) Press + Δ or – ∇ to set the time (hour then minute) that you want to start blocking the channel and press RETURN.



(4) Press + Δ or – ∇ to select the hour duration you want to block and press RETURN.
Each time you press RETURN, the hour duration increases by one hour up to a maximum of 12 hours.



(5) Press + Δ or – ∇ to select the channel and press RETURN.



If you select the blocked channel during the time you set, the message "BLOCKED" appears and the picture is blocked and the sound is muted.

To cancel a CHANNEL BLOCK setting

Press RESET on the remote commander.

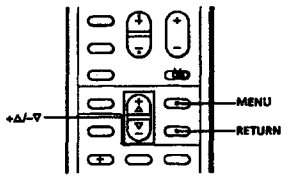
Note

- If the CHANNEL BLOCK and ON/OFF TIMER settings are overlapped, the later time setting has priority over the other setting.

Customizing the channel number buttons (CH CAPTION/GUIDE)

You can choose up to 12 channels, caption each channel, and assign a specific channel number button to each channel. This feature allows you to select your favorite channels easily by name. For example, you can name channel 20 "ESPN," and assign the channel number 4 button to it.

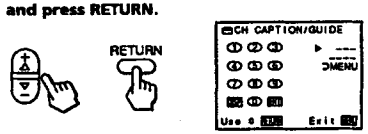
Setting captions to favorite channels



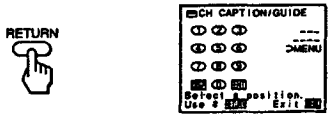
1 Press MENU.

2 Press + Δ or – ∇ to select SET UP and press RETURN.

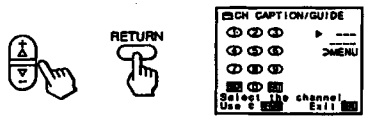
3 Press + Δ or – ∇ to select CH CAPTION/GUIDE and press RETURN.



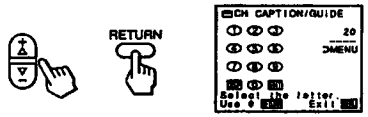
4 Press RETURN again.



5 Press + Δ or – ∇ to select a channel guide number button and press RETURN.
Each time you press + Δ or – ∇, the channel positions change to red in turns. The channel number button you select will be the one you press to call up your favorite channel.

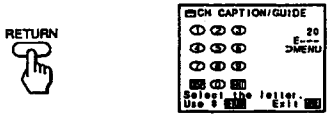


6 Press + Δ or – ∇ to select the channel that you want to caption and press RETURN.

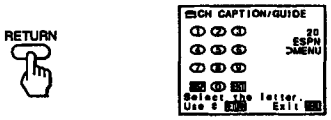


7 Enter the letters or numbers (up to four) to caption the channel:
(1) Press + Δ or – ∇ to select the first letter (number).
Each time you press + Δ or – ∇, the letter (number) changes as shown below.

(2) Press RETURN.



(3) Repeat steps (1) and (2) to select the remaining letters (numbers) and press RETURN.



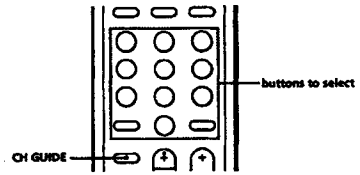
(continued)

8 Repeat steps 4 to 7 to caption other channels.

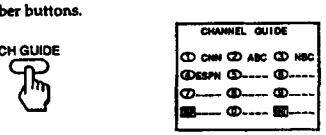
To erase a caption
Press RESET after step 4.

Notes
- The position number you already selected appears in yellow.
- If the CH CAPTION/GUIDE menu appears in black, the projection TV is set to a video input, and you cannot select CH CAPTION/GUIDE. Press TV so that a channel number appears.
- If more than 90 seconds elapse after you press a button, the menu disappears automatically.

Selecting a captioned channel



1 Press CH GUIDE.
The CHANNEL GUIDE menu appears showing channel captions and the corresponding channel number buttons.

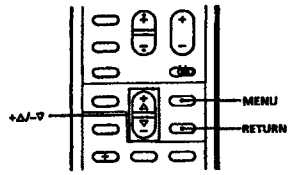


2 Press a channel number button, the DISPLAY or ENTER button to select the channel you want.

To cancel the CHANNEL GUIDE menu
Press CH GUIDE again.

Setting video labels (VIDEO LABEL)

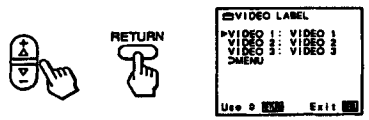
This feature allows you to label each input mode so that you can easily identify the connected equipment. For example, you can label VIDEO 1 IN as VHS.



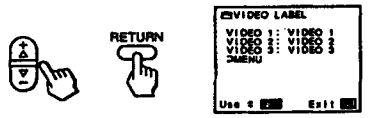
1 Press MENU.

2 Press + Δ or – ∇ to select SET UP and press RETURN.

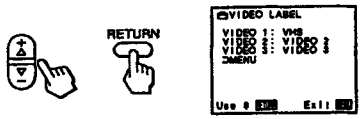
3 Press + Δ or – ∇ to select VIDEO LABEL and press RETURN.



4 Press + Δ or – ∇ to select the input mode you want to label and press RETURN.



5 **Press + △ or – ▽ to select the label and press RETURN.**



Each time you press + △ or – ▽, the label changes as shown below.

VIDEO 1
VIDEO 1→S-VIDEO→BETA→8mm→VHS→LD→DSS
↑_____↓

VIDEO 2
VIDEO 2→BETA→8mm→VHS→LD→DSS
↑_____↓

VIDEO 3
VIDEO 3→BETA→8mm→VHS→LD→DSS
↑_____↓

6 **Repeat steps 4 and 5 to label other input modes.**

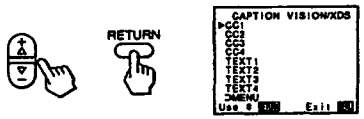
Note
- If more than 90 seconds elapse after you press a button, the menu disappears automatically.

Displaying Caption Vision (CAPTION VISION/XDS)

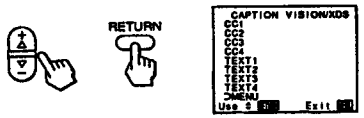
Some programs are broadcast with Caption Vision. To display Caption Vision, select either CC1, CC2, CC3, CC4, TEXT1, TEXT2, TEXT3 or TEXT4 from the menu. CC1, CC2, CC3 or CC4 shows you a caption, that is a printed version of the dialog or sound effects of a program. (The mode should be set to CC1 for most programs.)
TEXT1, TEXT2, TEXT3 or TEXT4 shows you text, that is information presented using either half or the whole screen. It is not usually related to the program.

1 **Press MENU.**

2 **Press + △ or – ▽ to select CAPTION VISION/XDS and press RETURN.**



3 **Press + △ or – ▽ to select the caption type and press RETURN.**
The selected caption type is colored green.



(continued)

To turn off the captions or text
Press DISPLAY on the remote commander.
Each time you press DISPLAY, the display changes as follows:
on-screen information→XDS*→Caption Vision or Text
↑_____ DISPLAY OFF ←_____↓

"DISPLAY OFF" goes off after three seconds.

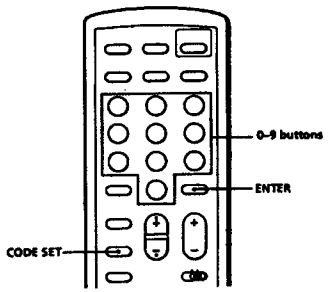
* Some programs are broadcast with XDS service which shows a network name, program name, program length, call letters and time in show data. When you select XDS with the DISPLAY button, This information will be displayed on the screen if the broadcaster offers this service.

Note
- Captions may appear with a white box or another error instead of a certain word. Poor reception of TV programs can also cause errors in Closed Caption.

Operating video equipment

You can operate a piece of video equipment that has an infrared remote sensor with the supplied remote commander. Before operating, set the manufacturer's code number.

Setting the manufacturer's code



While pressing CODE SET, press 0 – 9 to enter the manufacturer's code number (see the chart in the right column) and press ENTER. For example, to operate a Sony 8 mm VCR, press 0, 2 and ENTER.

Manufacturer code numbers

Manufacturer	Code number
SONY	01, 02, 03, 04
CANON	05
EMERSON	22, 30, 33
FISHER	10, 11, 12, 15
FUNAI	29
GENERAL ELECTRIC	05, 08
GOLDSTAR	25
HITACHI	07, 08, 36
JVC	16, 35
MAGNAVOX	05, 06, 09
MITSUBISHI	18, 19, 26, 27
MULTITECH	29
NEC	16, 23, 31
PANASONIC	05, 06
PHILCO	05, 06
PHILIPS	05, 06, 09
QUASAR	05, 06
RCA	07, 08
SAMSUNG	24, 32
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SHINTOM	34
SYLVANIA	05, 06, 09
SYMPHONIC	29
TEKNIKA	28, 29
TOSHIBA	20, 21
TOTE VISION	25
ZENITH	17

Notes

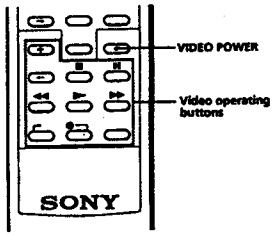
- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- In some rare cases, you may not be able to operate your non-Sony video equipment with this remote commander. This is because your equipment may use a code that is not provided with this remote commander. In this case, please use the equipment's own remote control unit.
- The code numbers for Sony equipment are assigned at the factory as follows:

Beta, ED Beta VCRs	01
8 mm VCR	02
VHS VCR	03 (preset code for this remote commander)
MDP	04

Caution

When you remove a battery from the remote commander, the code may revert to 01. Reset the codes each time you replace the battery, if necessary.

Operating video equipment



Use the video operating buttons on the remote commander to operate the video equipment.

Operating a VCR	Buttons on the remote commander
To turn on or off	Press VIDEO POWER
To change channels	Press CH +/–
To record	Press ● and REC simultaneously
To play	Press ►
To stop	Press ■
To fast forward	Press ►►
To rewind the tape	Press ◄◄
To pause	Press II
To search the picture forward and backward	Press ►► or ◄◄ during playback

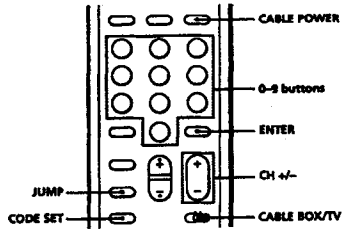
Operating a laser-disc player	Buttons on the remote commander
To play	Press ►
To stop	Press ■
To pause	Press II To resume normal playback, press again.
To search the picture forward and backward	Keep pressing ►► or ◄◄ during playback To resume normal playback, release the button.
To search the chapter forward and backward	Press CH +/–

Note

- If the video equipment does not have a certain function, the corresponding button on this remote commander will not operate.

Operating a cable box

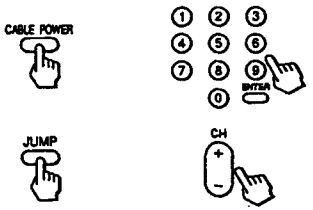
You can operate a connected cable box with the supplied remote commander. Before operating, set the manufacturer's code number.



1 Set the CABLE BOX/TV selector to CABLE BOX.

2 While pressing CODE SET, press 0 – 9 to enter the manufacturer's code number (see the chart below) and press ENTER. For example, to operate a Zenith cable box, press 6 and 8 and press ENTER.

3 Use CABLE POWER and the projection TV control buttons (0 – 9, ENTER, JUMP and CH +/–) to operate the cable box.



To operate the projection TV

Set the CABLE BOX/TV selector to TV. Then use the projection TV control buttons to control the projection TV.

For more details on operating the cable box

Refer to the operating instructions that come with the cable box.

Manufacturers and code numbers (cable box)

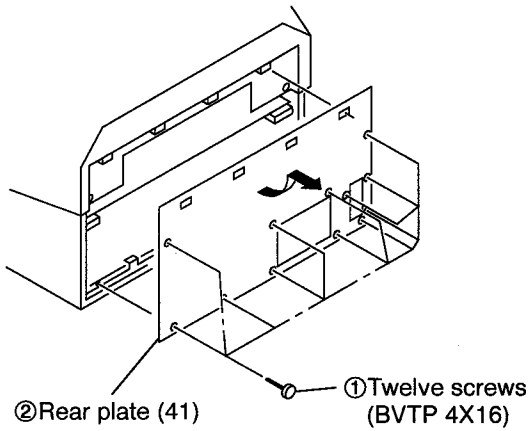
Manufacturer	Code number
JERROLD	60, 61, 62, 63, 64, 65, 73
PIONEER	69, 70
SCIENTIFIC ATLANTA	66, 67
TOCOM	71, 72
ZENITH	68

Notes

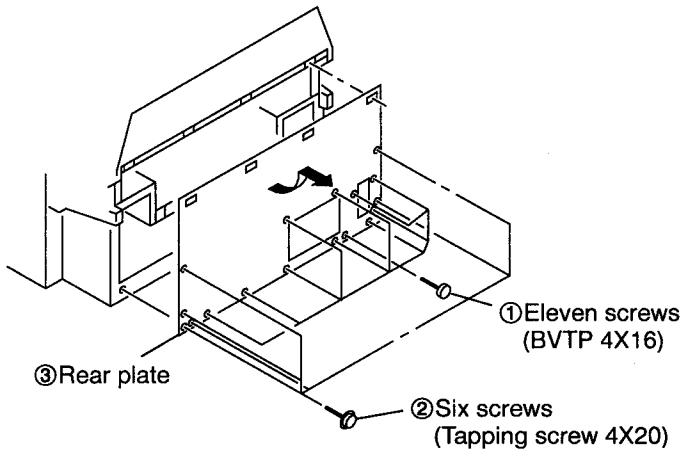
- If more than one code number is listed, try entering them one by one until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, your equipment may use a code that is not provided with this remote commander and you may not be able to operate your cable box with the supplied remote commander. In this case, use the equipment's own remote control unit.
- When you remove a battery from the remote commander, the code may be erased. Reset the code each time you replace the battery, if necessary.

SECTION 2
DISASSEMBLY

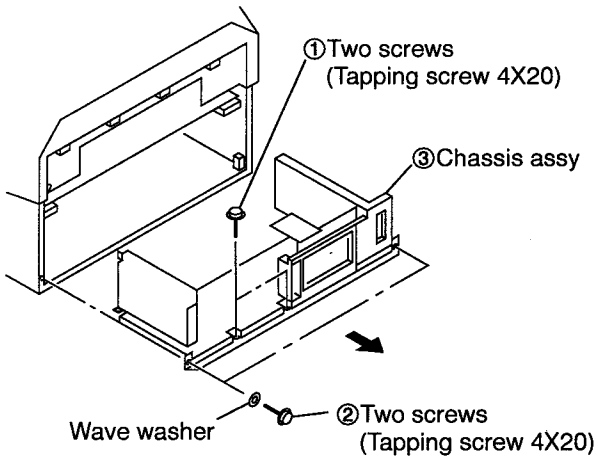
2-1-1. REAR PLATE REMOVAL (KP-41T15)



2-1-2. REAR PLATE REMOVAL (KP-46S15/53S15)

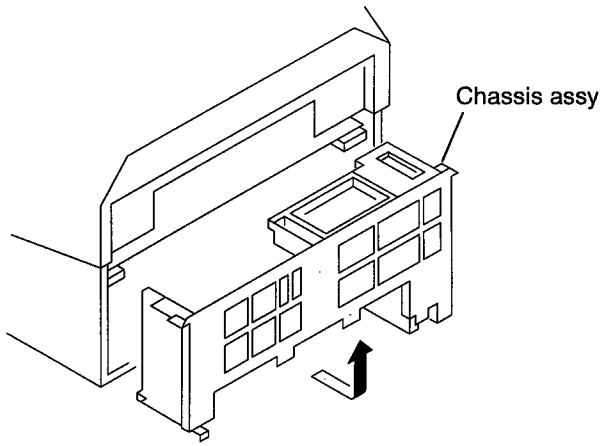


2-2. CHASSIS ASSY REMOVAL



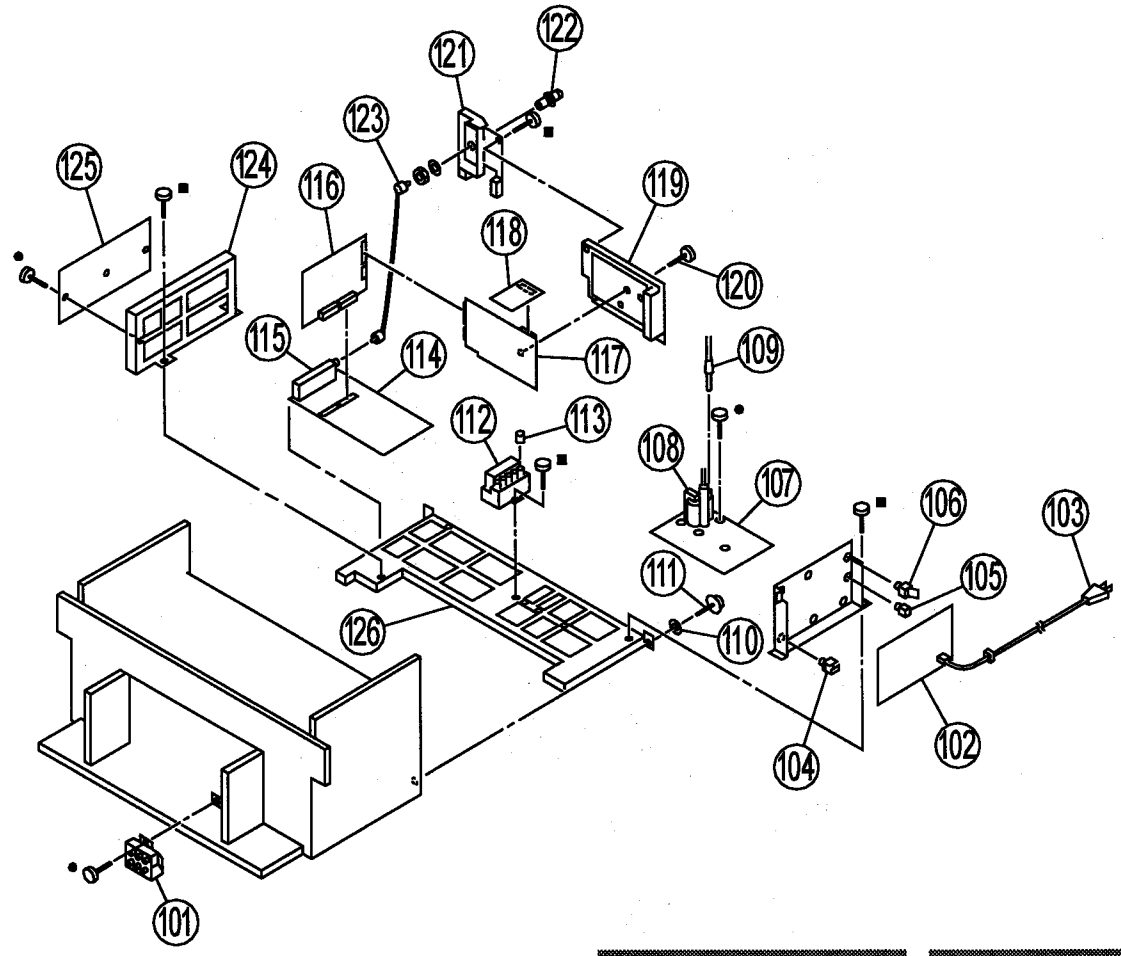
2-3. SERVICE POSITION

· **Remove the chassis assy (Refer to 2-2.)**



5-3. CHASSIS

●: 7-685-648-79 + BVTP 3×12
■: 7-685-663-79 + BVTP 4×16



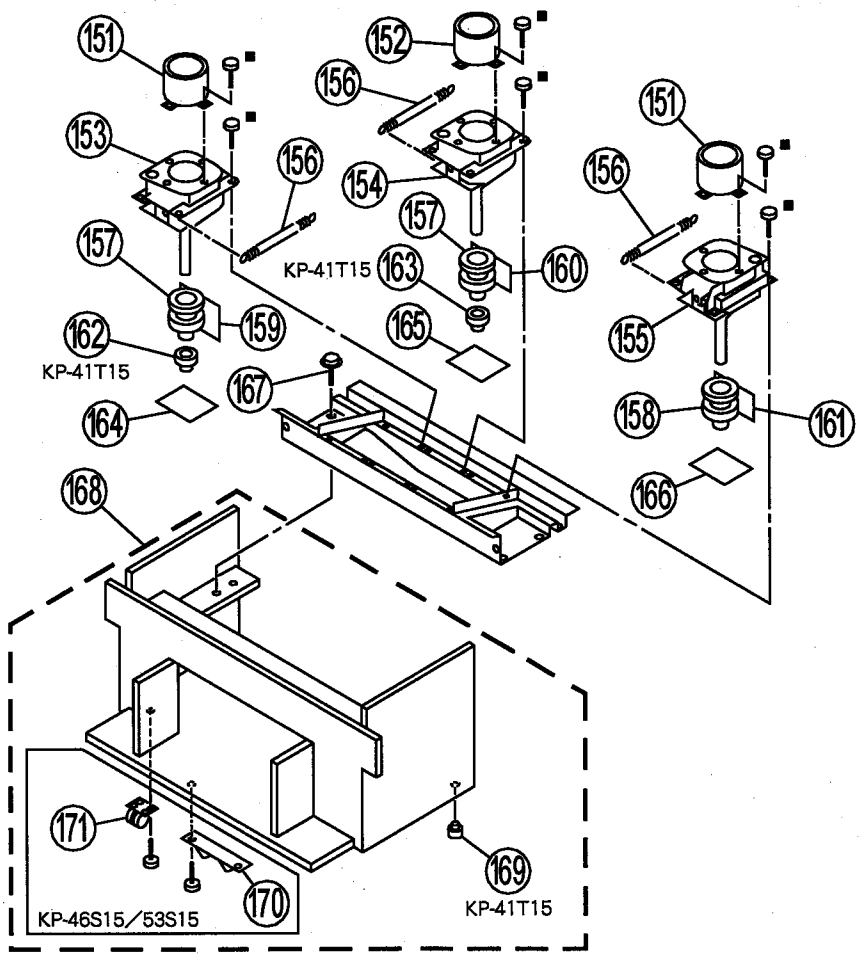
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
101	⚠1-223-925-11	RESISTOR ASSY (HIGH-VOLTAGE)	
102	*A-1316-212-A	G BOARD, COMPLETE	
103	⚠1-769-837-11	CORD, POWER(WITH NOISE FILTER) 7.0A/125V	
104	*3-659-682-11	HOLDER, PC BOARD	
105	*4-382-848-01	HOLDER, PCB	
106	*3-703-141-00	HOLDER, PCB	
107	*A-1341-885-A	E BOARD, COMPLETE	
108	⚠8-598-939-00	TRANSFORMER ASSY, FLYBACK (MX-2631/A4S)	
109	⚠1-900-211-34	LEAD ASSY, HV	
110	4-042-667-01	WASHER, WAVE	
111	4-041-164-11	SCREW (4X20), TAPPING	
112	⚠8-598-955-00	BLOCK ASSY, HIGH VOLTAGE	
113	4-373-137-01	CAP (Z), RUBBER	
114	*A-1297-476-A	A BOARD, COMPLETE	
115	⚠8-598-254-00	TUNER BTF-WA402	
116	*A-1306-493-A	M BOARD, COMPLETE (KP-41T15)	
	*A-1306-498-A	M BOARD, COMPLETE (KP-46S15/53S15)	
117	*A-1373-511-A	U BOARD, COMPLETE	
118	*A-1195-062-A	P BOARD, COMPLETE	
119	4-047-951-01	TERMINAL BOARD (A)	
120	4-041-165-01	SCREW (3X12), TAPPING, +BV	
121	4-047-952-01	TERMINAL BOARD (B)	
122	1-561-306-00	JACK, PIN (F)	
123	1-556-945-21	CABLE, P-P	
124	*4-047-950-01	BRACKET, D PC BOARD	
125	*A-1346-296-A	D BOARD, COMPLETE	
126	*4-047-949-01	BRACKET, MAIN PC BOARD	

5-4. PICTURE TUBE

■ : 7-685-663-79 + BVTP 4×16



The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
151	4-034-057-01	LENS (LINNIT)	
152	4-034-057-11	LENS (LINNIT)	
153	⚠8-736-080-05	PICTURE TUBE 07MAB5(R) (KP-41T15/46S15)	
	⚠8-736-082-05	PICTURE TUBE 07MAB6(R) (KP-53S15)	
154	⚠8-736-078-05	PICTURE TUBE 07MAB5(G)	
155	⚠8-736-079-05	PICTURE TUBE 07MAB5(B) (KP-41T15/46S15)	
	⚠8-736-081-05	PICTURE TUBE 07MAB6(B) (KP-53S15)	
156	4-048-142-01	SPRING, TENSION	
157	⚠8-451-463-11	DY Y829PA2N (R),(G)	
158	⚠8-451-463-21	DY Y829PA2N2 (B)	
159	*A-1390-487-A	ZR BOARD, COMPLETE (KP-41T15)	
	*A-1390-513-A	ZR BOARD, COMPLETE (KP-46S15/53S15)	
160	*A-1390-489-A	ZG BOARD, COMPLETE (KP-41T15)	
	*A-1390-512-A	ZG BOARD, COMPLETE (KP-46S15/53S15)	
161	*A-1390-491-A	ZB BOARD, COMPLETE	
162	⚠1-452-790-21	NECK ASSY (KP-41T15)	
163	⚠1-452-790-11	NECK ASSY (KP-41T15)	
164	*A-1331-408-A	CR BOARD, COMPLETE	
165	*A-1331-409-A	CG BOARD, COMPLETE	
166	*A-1331-410-A	CB BOARD, COMPLETE	
167	4-041-164-11	SCREW (4X20), TAPPING	
168	*X-4032-547-1	CABINET ASSY, BOTTOM (KP-41T15)	169
	*X-4032-615-1	CABINET ASSY, BOTTOM (KP-46S15)	120,121
	*X-4032-616-1	CABINET ASSY, BOTTOM (KP-53T15)	120,121
169	4-047-987-01	FOOT (KP-41T15)	
170	4-048-175-01	FOOT, PLASTIC (KP46S15/53S15)	
171	4-040-755-01	CASTER (DIA.30) (KP46S15/53S15)	

P

SECTION 6
ELECTRICAL PARTS LIST

NOTE :

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms.
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

- The components identified by ☒ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1195-062-A	P BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C3201	1-104-664-11	ELECT 47MF	20%	16V	
C3203	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C3204	1-126-964-11	ELECT 10MF	20%	50V	
C3205	1-126-964-11	ELECT 10MF	20%	50V	
C3206	1-126-964-11	ELECT 10MF	20%	50V	
C3207	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C3208	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C3209	1-126-962-11	ELECT 3.3MF	20%	50V	
C3210	1-104-664-11	ELECT 47MF	20%	16V	
C3212	1-126-962-11	ELECT 3.3MF	20%	50V	
C3213	1-164-346-11	CERAMIC CHIP 1MF		16V	
C3214	1-164-346-11	CERAMIC CHIP 1MF		16V	
C3215	1-164-346-11	CERAMIC CHIP 1MF		16V	
C3216	1-164-005-11	CERAMIC CHIP 0.47MF		25V	
C3217	1-164-346-11	CERAMIC CHIP 1MF		16V	
C3218	1-164-346-11	CERAMIC CHIP 1MF		16V	
C3219	1-126-941-11	ELECT 470MF	20%	16V	
C3220	1-164-346-11	CERAMIC CHIP 1MF		16V	
C3221	1-164-346-11	CERAMIC CHIP 1MF		16V	
C3222	1-164-336-11	CERAMIC CHIP 0.33MF		25V	
C3223	1-164-336-11	CERAMIC CHIP 0.33MF		25V	
C3224	1-164-222-11	CERAMIC CHIP 0.22MF		25V	
C3225	1-164-222-11	CERAMIC CHIP 0.22MF		25V	
C3226	1-164-005-11	CERAMIC CHIP 0.47MF		25V	
C3227	1-164-346-11	CERAMIC CHIP 1MF		16V	
C3228	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C3229	1-163-093-00	CERAMIC CHIP 10PF	5%	50V	
C3230	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3231	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C3232	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C3233	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3234	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3235	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3236	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3237	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3238	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C3239	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3240	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C3241	1-163-103-00	CERAMIC CHIP 27PF	5%	50V	
C3242	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3243	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C3244	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	
C3245	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3246	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3247	1-163-033-91	CERAMIC CHIP 0.022MF		50V	
C3248	1-163-125-00	CERAMIC CHIP 220PF	5%	50V	
C3249	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C3250	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	
C3251	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3252	1-163-103-00	CERAMIC CHIP 27PF	5%	50V	
C3253	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C3254	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3255	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C3256	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C3257	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C3258	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	
C3259	1-163-111-00	CERAMIC CHIP 56PF	5%	50V	
C3260	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	
C3261	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3263	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3264	1-165-319-11	CERAMIC CHIP 0.1MF		50V	
C3265	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3266	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3267	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3268	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3269	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3270	1-165-319-11	CERAMIC CHIP 0.1MF		50V	
C3271	1-165-319-11	CERAMIC CHIP 0.1MF		50V	
C3272	1-165-319-11	CERAMIC CHIP 0.1MF		50V	
C3273	1-163-109-00	CERAMIC CHIP 47PF	5%	50V	
C3274	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C3275	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C3276	1-163-111-00	CERAMIC CHIP 56PF	5%	50V	
C3277	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C3278	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	
C3279	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C3280	1-126-964-11	ELECT 10MF	20%	50V	
C3282	1-164-346-11	CERAMIC CHIP 1MF		16V	
		<CONNECTOR>			
CN150	1-573-297-21	CONNECTOR, BOARD TO BOARD 18P			
		<DIODE>			
D3202	8-719-031-68	DIODE HVU359TRF			
D3203	8-719-404-46	DIODE MA110			
D3208	8-719-110-17	DIODE RD10SEB2			
D3209	8-719-110-17	DIODE RD10SEB2			
		<IC>			
IC3200	8-759-288-13	IC MSM51C262-ZS			
IC3201	8-759-093-29	IC MB86144BPF-G-BND			
IC3202	8-759-093-28	IC MB40176PF-G-BND-EF			
IC3203	8-759-093-28	IC MB40176PF-G-BND-EF			
IC3204	8-759-093-25	IC MB3512PFQ			

P A

REF.NO.	PART NO.	DESCRIPTION				REMARK
IC3205	8-759-243-19	IC TC7SU04F				
		<COIL>				
L3201	1-410-470-11	INDUCTOR	10UH			
L3202	1-408-424-00	INDUCTOR	180UH			
L3203	1-408-424-00	INDUCTOR	180UH			
L3204	1-410-476-11	INDUCTOR	33UH			
L3205	1-410-470-11	INDUCTOR	10UH			
L3206	1-410-387-11	INDUCTOR	33UH			
L3207	1-410-387-11	INDUCTOR	33UH			
L3208	1-410-387-11	INDUCTOR	33UH			
L3209	1-410-387-11	INDUCTOR	33UH			
		<TRANSISTOR>				
Q3201	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3202	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3203	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3204	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3206	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3207	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3208	8-729-422-27	TRANSISTOR 2SD601A-Q				
Q3209	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3210	8-729-216-22	TRANSISTOR 2SA1162-G				
		<RESISTOR>				
R3201	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3202	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3203	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3204	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3205	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R3207	1-216-295-00	CONDUCTOR, CHIP				
R3208	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3209	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R3210	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R3211	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3212	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3213	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R3214	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R3215	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3216	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3217	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3218	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3219	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3220	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3221	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R3222	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R3223	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3224	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3225	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3226	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R3227	1-216-647-11	METAL CHIP	680	0.50%	1/10W	
R3228	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R3229	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3230	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3231	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3232	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R3233	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3234	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R3235	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R3236	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3237	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R3238	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3239	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R3241	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3242	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3243	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3244	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3245	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3246	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R3247	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R3248	1-216-295-00	CONDUCTOR, CHIP				
R3249	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3250	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R3251	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3252	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R3253	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3254	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R3255	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R3256	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R3259	1-216-298-00	METAL GLAZE	2.2	5%	1/10W	
R3260	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3263	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3264	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3265	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3266	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3267	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R3268	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R3269	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3270	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R3271	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R3273	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3274	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3275	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3276	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3277	1-216-298-00	METAL GLAZE	2.2	5%	1/10W	
		<CRYSTAL>				
X3201	1-567-878-11	VIBRATOR, CRYSTAL				
X3202	1-567-878-11	VIBRATOR, CRYSTAL				
		**********				
	*A-1297-476-A	A BOARD, COMPLETE				
		**********				
	4-365-216-00	SPACER, MICA				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C201	1-104-665-11	ELECT	100MF	20%	25V	
C202	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C203	1-130-489-00	FILM	0.033MF	5%	50V	
C204	1-124-902-00	ELECT	0.47MF	20%	50V	
C205	1-104-665-11	ELECT	100MF	20%	25V	
C206	1-124-902-00	ELECT	0.47MF	20%	50V	
C207	1-124-903-11	ELECT	1MF	20%	50V	
C208	1-124-768-11	ELECT	4.7MF	20%	50V	
C209	1-124-903-11	ELECT	1MF	20%	50V	
C210	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C211	1-130-489-00	FILM	0.033MF	5%	50V	
C212	1-124-768-11	ELECT	4.7MF	20%	50V	
C220	1-126-964-11	ELECT	10MF	20%	50V	
C221	1-126-964-11	ELECT	10MF	20%	50V	
C222	1-126-964-11	ELECT	10MF	20%	50V	

A

REF.NO.	PART NO.	DESCRIPTION				REMARK
C223	1-126-964-11	ELECT	10MF	20%	50V	
C226	1-104-665-11	ELECT	100MF	20%	25V	
C232	1-104-664-11	ELECT	47MF	20%	25V	
C233	1-124-903-11	ELECT	1MF	20%	50V	
C234	1-104-664-11	ELECT	47MF	20%	25V	
C236	1-124-902-00	ELECT	0.47MF	20%	50V	
C238	1-104-665-11	ELECT	100MF	20%	25V	
C239	1-126-943-11	ELECT	2200MF	20%	25V	
C240	1-126-943-11	ELECT	2200MF	20%	25V	
C241	1-137-399-11	FILM	0.1MF	5%	50V	
C242	1-137-399-11	FILM	0.1MF	5%	50V	
C243	1-137-399-11	FILM	0.1MF	5%	50V	
C244	1-104-665-11	ELECT	100MF	20%	25V	
C245	1-137-399-11	FILM	0.1MF	5%	50V	
C262	1-104-664-11	ELECT	47MF	20%	25V	
C263	1-104-665-11	ELECT	100MF	20%	25V	
C264	1-104-665-11	ELECT	100MF	20%	25V	
C265	1-104-665-11	ELECT	100MF	20%	25V	
C266	1-104-665-11	ELECT	100MF	20%	25V	
C267	1-104-664-11	ELECT	47MF	20%	25V	
C501	1-124-902-00	ELECT	0.47MF	20%	50V	
C502	1-104-664-11	ELECT	47MF	20%	25V	
C503	1-137-370-11	FILM	0.01MF	5%	50V	
C504	1-164-070-11	CERAMIC	100PF	5%	50V	
C505	1-137-372-11	FILM	0.022MF	5%	50V	
C506	1-123-024-21	ELECT	33MF		160V	
C507	1-107-368-11	FILM	0.047MF	10%	200V	
C508	1-107-638-11	ELECT	33MF	20%	160V	
C509	1-107-368-11	FILM	0.047MF	10%	200V	
C510	1-102-030-00	CERAMIC	330PF	10%	500V	
C511	1-137-414-11	FILM	0.0047MF	10%	100V	
C512	1-162-115-00	CERAMIC	330PF	10%	2KV	
C513	1-136-598-11	FILM	3MF	5%	200V	
C514	1-136-613-11	FILM	0.0068MF	3%	2KV	
C515	1-162-114-00	CERAMIC	0.0047MF		2KV	
C516	1-107-719-11	ELECT	220MF	20%	50V	
C517	1-126-971-11	ELECT	470MF	20%	50V	
C518	1-126-971-11	ELECT	470MF	20%	50V	
C519	1-124-903-11	ELECT	1MF	20%	50V	
C1001	1-124-927-11	ELECT	4.7MF	20%	50V	
C1004	1-126-935-11	ELECT	470MF	20%	16V	
C1005	1-104-665-11	ELECT	100MF	20%	25V	
C1006	1-101-004-00	CERAMIC	0.01MF		50V	
C1007	1-126-935-11	ELECT	470MF	20%	16V	
C1008	1-101-004-00	CERAMIC	0.01MF		50V	
C1010	1-126-964-11	ELECT	10MF	20%	50V	
C1012	1-102-121-00	CERAMIC	0.0022MF	10%	50V	

<CONNECTOR>

CN221	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P	
CN222	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P	
CN223	*1-564-507-11	PLUG, CONNECTOR 4P	
CN224	*1-564-507-11	PLUG, CONNECTOR 4P	
CN225	*1-564-513-11	PLUG, CONNECTOR 10P	
CN511	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN527	*1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
CN528	1-695-915-11	TAB (CONTACT)	
CN541	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN571	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN1026	*1-564-506-11	PLUG, CONNECTOR 3P	

<DIODE>

D201	8-719-110-17	DIODE RD10ESB2	
D202	8-719-110-17	DIODE RD10ESB2	
D220	8-719-911-19	DIODE 1SS119-25	
D221	8-719-911-19	DIODE 1SS119-25	
D231	8-719-911-19	DIODE 1SS119-25	
D232	8-719-911-19	DIODE 1SS119-25	
D262	8-719-911-19	DIODE 1SS119-25	
D263	8-719-911-19	DIODE 1SS119-25	
D264	8-719-911-19	DIODE 1SS119-25	
D301	8-719-110-56	DIODE RD22ESB1	
D302	8-719-110-56	DIODE RD22ESB1	
D303	8-719-110-56	DIODE RD22ESB1	
D304	8-719-110-56	DIODE RD22ESB1	
D501	8-719-911-19	DIODE 1SS119-25	
D502	8-719-109-72	DIODE RD3.9ESB2	
D504	8-719-911-19	DIODE 1SS119-25	
D505	8-719-911-19	DIODE 1SS119-25	
D506	8-719-300-80	DIODE RU-1C	
D507	8-719-018-82	DIODE RGP02-20EL-6394	
D509	8-719-900-95	DIODE V09G	
D510	8-719-900-95	DIODE V09G	
D511	8-719-911-19	DIODE 1SS119-25	
D1001	8-719-110-76	DIODE RD33ESB1	

<IC>

IC201	8-759-135-80	IC UPC358C
IC202	8-759-090-21	IC TDA8424
IC230	8-759-190-89	IC TDA7265
IC262	8-759-054-12	IC PQ09RA1
IC263	8-759-504-46	IC PQ05RF1
IC264	8-759-701-79	IC NJM7812FA

<COIL>

L501	1-411-189-11	COIL, CHOKE 15MMH
L503	1-406-832-11	COIL,HORIZONTAL LINEARITY(HLC)
L1001	1-408-408-00	INDUCTOR 8.2UH
L1002	1-408-408-00	INDUCTOR 8.2UH
L1003	1-408-408-00	INDUCTOR 8.2UH

<TRANSISTOR>

Q220	8-729-927-14	TRANSISTOR DTC323TS
Q221	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q222	8-729-927-14	TRANSISTOR DTC323TS
Q223	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q230	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q231	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q232	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q234	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q235	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q236	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q501	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q502	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q503	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q504	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q505	8-729-119-80	TRANSISTOR 2SC2688-LK
Q506	8-729-201-31	TRANSISTOR 2SA1013-O
Q507	8-729-304-92	TRANSISTOR 2SB649A-C
Q508	8-729-201-31	TRANSISTOR 2SA1013-O
Q509	8-729-010-98	TRANSISTOR 2SA1492M-OPY
Q510	8-729-021-48	TRANSISTOR 2SD2348 LBSONY

A M

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q511	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1003	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1004	8-729-119-78	TRANSISTOR 2SC2785-HFE				
		<RESISTOR>				
R201	1-249-429-11	CARBON	10K	5%	1/4W	
R203	1-249-429-11	CARBON	10K	5%	1/4W	
R204	1-249-429-11	CARBON	10K	5%	1/4W	
R205	1-249-429-11	CARBON	10K	5%	1/4W	
R207	1-249-431-11	CARBON	15K	5%	1/4W	
R208	1-249-429-11	CARBON	10K	5%	1/4W	
R209	1-249-431-11	CARBON	15K	5%	1/4W	
R210	1-247-815-91	CARBON	220	5%	1/4W	
R211	1-249-429-11	CARBON	10K	5%	1/4W	
R212	1-249-441-11	CARBON	100K	5%	1/4W	
R213	1-249-441-11	CARBON	100K	5%	1/4W	
R214	1-247-815-91	CARBON	220	5%	1/4W	
R215	1-249-441-11	CARBON	100K	5%	1/4W	
R216	1-249-441-11	CARBON	100K	5%	1/4W	
R217	1-247-807-31	CARBON	100	5%	1/4W	
R218	1-247-807-31	CARBON	100	5%	1/4W	
R219	1-249-417-11	CARBON	1K	5%	1/4W	
R220	1-249-429-11	CARBON	10K	5%	1/4W	
R221	1-249-437-11	CARBON	47K	5%	1/4W	
R222	1-249-417-11	CARBON	1K	5%	1/4W	
R223	1-249-429-11	CARBON	10K	5%	1/4W	
R224	1-249-429-11	CARBON	10K	5%	1/4W	
R230	1-249-430-11	CARBON	12K	5%	1/4W	
R231	1-249-429-11	CARBON	10K	5%	1/4W	
R233	1-249-429-11	CARBON	10K	5%	1/4W	
R234	1-249-441-11	CARBON	100K	5%	1/4W	
R235	1-249-414-11	CARBON	560	5%	1/4W	
R236	1-249-432-11	CARBON	18K	5%	1/4W	
R237	1-249-414-11	CARBON	560	5%	1/4W	
R238	1-249-431-11	CARBON	15K	5%	1/4W	
R239	1-249-430-11	CARBON	12K	5%	1/4W	
R241	1-249-436-11	CARBON	39K	5%	1/4W	
R242	1-249-432-11	CARBON	18K	5%	1/4W	
R243	1-247-863-91	CARBON	22K	5%	1/4W	
R244	1-247-863-91	CARBON	22K	5%	1/4W	
R246	1-247-863-91	CARBON	22K	5%	1/4W	
R247	1-249-430-11	CARBON	12K	5%	1/4W	
R249	1-247-807-31	CARBON	100	5%	1/4W	
R250	1-249-417-11	CARBON	1K	5%	1/4W	
R251	1-249-437-11	CARBON	47K	5%	1/4W	
R252	1-249-417-11	CARBON	1K	5%	1/4W	
R255	1-249-429-11	CARBON	10K	5%	1/4W	
R257	1-249-429-11	CARBON	10K	5%	1/4W	
R258	1-249-429-11	CARBON	10K	5%	1/4W	
R259	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R260	1-216-357-00	METAL OXIDE	4.7	5%	1W	F
R501	1-249-421-11	CARBON	2.2K	5%	1/4W	
R502	1-249-429-11	CARBON	10K	5%	1/4W	
R503	1-249-441-11	CARBON	100K	5%	1/4W	
R504	1-249-429-11	CARBON	10K	5%	1/4W	
R505	1-215-437-00	METAL	4.7K	1%	1/4W	
R506	1-215-433-00	METAL	3.3K	1%	1/4W	
R507	1-249-407-11	CARBON	150	5%	1/4W	
R508	1-249-421-11	CARBON	2.2K	5%	1/4W	
R509	1-249-423-11	CARBON	3.3K	5%	1/4W	
R510	1-249-417-11	CARBON	1K	5%	1/4W	
R511	1-247-895-00	CARBON	470K	5%	1/4W	
R512	1-215-925-11	METAL OXIDE	22K	5%	3W	F
R513	1-215-900-11	METAL OXIDE	22K	5%	2W	F
R514	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R515	1-215-925-11	METAL OXIDE	22K	5%	3W	F
R516	1-249-430-11	CARBON	12K	5%	1/4W	F
R517	1-249-429-11	CARBON	10K	5%	1/4W	
R518	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R519	1-249-417-11	CARBON	1K	5%	1/4W	
R520	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R521	1-249-437-11	CARBON	47K	5%	1/4W	
R522	1-249-417-11	CARBON	1K	5%	1/4W	F
R523	1-249-426-11	CARBON	5.6K	5%	1/4W	F
R524	1-215-925-11	METAL OXIDE	22K	5%	3W	F
R525	1-216-373-11	METAL OXIDE	2.2	5%	2W	F
R526	1-216-478-11	METAL OXIDE	390	5%	3W	F
R528	1-216-477-11	METAL OXIDE	270	5%	3W	F
R529	1-216-477-11	METAL OXIDE	270	5%	3W	F
R530	1-216-477-11	METAL OXIDE	270	5%	3W	F
R531	1-216-477-11	METAL OXIDE	270	5%	3W	F
R532	1-215-442-00	METAL	7.5K	1%	1/4W	
R533	1-215-443-00	METAL	8.2K	1%	1/4W	
R534	1-215-437-00	METAL	4.7K	1%	1/4W	
R1001	1-215-900-11	METAL OXIDE	22K	5%	2W	F
R1006	1-249-434-11	CARBON	27K	5%	1/4W	
R1007	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1008	1-247-807-31	CARBON	100	5%	1/4W	
R1010	1-249-411-11	CARBON	330	5%	1/4W	
R1014	1-249-436-11	CARBON	39K	5%	1/4W	
R1016	1-247-807-31	CARBON	100	5%	1/4W	
R1017	1-249-417-11	CARBON	1K	5%	1/4W	
R1018	1-215-432-00	METAL	3K	1%	1/4W	
R1019	1-249-441-11	CARBON	100K	5%	1/4W	
		<TRANSFORMER>				
T501	⚠1-437-078-11	TRANSFORMER, HORIZONTAL DRIVE				
		<TUNER>				
TU1002	⚠8-598-254-00	TUNER BTF-WA402				

****

*A-1306-493-A M BOARD, COMPLETE (KP-41T15)
****

*A-1306-498-A M BOARD, COMPLETE (KP-46S15/53S15)
****

4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

C001	1-126-935-11	ELECT	470MF	20%	16V
C002	1-126-916-11	ELECT	1000MF	20%	6.3V
C004	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C005	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C006	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C007	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C009	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C010	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C011	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C012	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C013	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C014	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C015	1-163-001-11	CERAMIC CHIP	220PF	10%	50V

M

REF.NO.	PART NO.	DESCRIPTION			REMARK
C016	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C017	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C018	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C019	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C020	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C021	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C022	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C023	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C024	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C025	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C026	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C028	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C029	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C030	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C031	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C032	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C033	1-163-809-11	CERAMIC CHIP	0.047MF	10% 25V	
C034	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C035	1-124-903-11	ELECT	1MF	20% 50V	
C037	1-163-009-11	CERAMIC CHIP	0.001MF	10% 50V	
C038	1-126-940-11	ELECT	330MF	20% 16V	
C040	1-124-903-11	ELECT	1MF	20% 50V	
C041	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C042	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C046	1-163-125-00	CERAMIC CHIP	220PF	5% 50V	
C047	1-124-903-11	ELECT	1MF	20% 50V	
C048	1-163-245-11	CERAMIC CHIP	56PF	5% 50V	
C049	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C050	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C051	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C054	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C055	1-163-037-11	CERAMIC CHIP	0.022MF	10% 25V	
C056	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C057	1-163-159-00	CERAMIC CHIP	12PF	2% 50V	
C058	1-104-896-11	CERAMIC CHIP	24PF	2% 50V	
C060	1-124-903-11	ELECT	1MF	20% 50V	
C062	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C063	1-126-964-11	ELECT	10MF	20% 50V	
C064	1-126-964-11	ELECT	10MF	20% 50V	
C065	1-163-038-00	CERAMIC CHIP	0.1MF	25V	
C066	1-163-135-00	CERAMIC CHIP	560PF	5% 50V	
C067	1-137-399-11	FILM	0.1MF	5% 50V	
C068	1-137-367-11	FILM	0.0033MF	5% 50V	
C069	1-137-375-11	FILM	0.068MF	5% 50V	
C070	1-104-664-11	ELECT	47MF	20% 25V	
C071	1-124-464-11	ELECT	0.22MF	20% 50V	
C074	1-126-940-11	ELECT	330MF	20% 16V	
C075	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C302	1-124-902-00	ELECT	0.47MF	20% 50V	
C303	1-124-902-00	ELECT	0.47MF	20% 50V	
C304	1-124-927-11	ELECT	4.7MF	20% 50V	
C309	1-163-019-00	CERAMIC CHIP	0.0068MF	10% 50V	
C310	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C311	1-124-925-11	ELECT	2.2MF	20% 50V	
C312	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C313	1-104-664-11	ELECT	47MF	20% 25V	
C314	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C315	1-126-934-11	ELECT	220MF	20% 16V	
C316	1-131-374-00	TANTALUM	33MF	10% 16V	
C317	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C318	1-124-925-11	ELECT	2.2MF	20% 50V	
C319	1-124-903-11	ELECT	1MF	20% 50V	
C320	1-124-903-11	ELECT	1MF	20% 50V	
C321	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C323	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C324	1-128-551-11	ELECT	22MF	20% 50V	
C327	1-163-139-00	CERAMIC CHIP	820PF	5% 50V	
C328	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C329	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	
C338	1-124-927-11	ELECT	4.7MF	20% 50V	
C339	1-124-464-11	ELECT	0.22MF	20% 50V	
C340	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C341	1-124-902-00	ELECT	0.47MF	20% 50V	
C342	1-124-902-00	ELECT	0.47MF	20% 50V	
C343	1-124-902-00	ELECT	0.47MF	20% 50V	
C344	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C345	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C346	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C347	1-124-902-00	ELECT	0.47MF	20% 50V	
C348	1-163-097-00	CERAMIC CHIP	15PF	5% 50V	
C349	1-163-109-00	CERAMIC CHIP	47PF	5% 50V	
C350	1-126-964-11	ELECT	10MF	20% 50V	(KP-41T15)
C352	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
C353	1-104-665-11	ELECT	100MF	20% 25V	
C354	1-163-101-00	CERAMIC CHIP	22PF	5% 50V	(KP-41T15)
C355	1-128-551-11	ELECT	22MF	20% 50V	(KP-41T15)
C357	1-104-664-11	ELECT	47MF	20% 25V	(KP-41T15)
C358	1-163-097-00	CERAMIC CHIP	15PF	5% 50V	(KP-41T15)
C359	1-163-125-00	CERAMIC CHIP	220PF	5% 50V	(KP-41T15)
C360	1-126-964-11	ELECT	10MF	20% 50V	(KP-41T15)
C361	1-126-964-11	ELECT	10MF	20% 50V	(KP-41T15)
C362	1-163-101-00	CERAMIC CHIP	22PF	5% 50V	(KP-41T15)
C363	1-163-009-11	CERAMIC CHIP	0.001MF	10% 50V	(KP-41T15)
C364	1-126-964-11	ELECT	10MF	20% 50V	(KP-41T15)
C365	1-163-101-00	CERAMIC CHIP	22PF	5% 50V	
C366	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C368	1-163-093-00	CERAMIC CHIP	10PF	5% 50V	
C369	1-163-809-11	CERAMIC CHIP	0.047MF	10% 25V	
C370	1-104-665-11	ELECT	100MF	20% 25V	
C371	1-104-665-11	ELECT	100MF	20% 25V	

<CONDUCTOR CHIP>

CJ001	1-216-295-00	CONDUCTOR, CHIP
CJ002	1-216-295-00	CONDUCTOR, CHIP
CJ003	1-216-295-00	CONDUCTOR, CHIP

<CONNECTOR>

CN046	*1-564-512-11	PLUG, CONNECTOR 9P	
CN053	*1-564-507-11	PLUG, CONNECTOR 4P	
CN054	1-573-979-21	CONNECTOR, BOARD TO BOARD 11P	
CN304	*1-564-512-11	PLUG, CONNECTOR 9P	
CN314	*1-564-509-11	PLUG, CONNECTOR 6P	(KP-41T15)
CN321	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P	
CN322	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P	

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN351	*1-564-509-11	PLUG, CONNECTOR 6P	
CN355	*1-565-930-11	CONNECTOR (RECEPTACLE) 30P	
CN356	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)	
CN357	*1-564-516-11	PLUG, CONNECTOR 13P	
CN358	*1-564-508-11	PLUG, CONNECTOR 5P	
		<DIODE>	
D001	8-719-404-46	DIODE MA110	
D002	8-719-404-46	DIODE MA110	
D003	8-719-404-46	DIODE MA110	
D004	8-719-109-88	DIODE RD5.6ESB1	
D005	8-719-109-88	DIODE RD5.6ESB1	
D006	8-719-109-88	DIODE RD5.6ESB1	
D007	8-719-109-88	DIODE RD5.6ESB1	
D008	8-719-002-81	DIODE 1T363	
D009	8-719-404-46	DIODE MA110	
D010	8-719-404-46	DIODE MA110	
D011	8-719-404-46	DIODE MA110	
D012	8-719-404-46	DIODE MA110	
D013	8-719-404-46	DIODE MA110	
D014	8-719-404-46	DIODE MA110	
D015	8-719-404-46	DIODE MA110	
D016	8-719-404-46	DIODE MA110	
D017	8-719-404-46	DIODE MA110	
D018	8-719-404-46	DIODE MA110	
D019	8-719-404-46	DIODE MA110	
D020	8-719-105-91	DIODE RD5.6M-B2	
D305	8-719-121-24	DIODE RD9.1ESL	
D307	8-719-121-24	DIODE RD9.1ESL	
D308	8-719-110-22	DIODE RD11ESB2	
D309	8-719-109-84	DIODE RD5.1ESB1	
D310	8-719-914-44	DIODE DAP20K	
D311	8-719-914-43	DIODE DAN202K	
D312	8-719-404-46	DIODE MA110	
D313	8-719-404-46	DIODE MA110	
D314	8-719-404-46	DIODE MA110	
D315	8-719-109-88	DIODE RD5.6ESB1	
D316	8-719-404-46	DIODE MA110	
D317	8-719-110-22	DIODE RD11ESB2	
D320	8-719-404-46	DIODE MA110	(KP-41T15)
D321	8-719-404-46	DIODE MA110	(KP-41T15)
D322	8-719-404-46	DIODE MA110	(KP-41T15)
D323	8-719-404-46	DIODE MA110	(KP-41T15)
D324	8-719-404-46	DIODE MA110	(KP-41T15)
D325	8-719-404-46	DIODE MA110	(KP-41T15)
D326	8-719-110-08	DIODE RD8.2ESB2	
D327	8-719-404-46	DIODE MA110	
D328	8-719-911-19	DIODE 1SS119-25	
		<IC>	
IC001	8-759-112-06	IC UPC78N05H	
IC002	8-752-863-20	IC CXP85332A-033S	
IC003	8-759-284-16	IC ST24C04CB1	
IC004	8-759-328-12	IC Z8622812PSC	
IC005	8-759-280-75	IC ST24C01CB1	
IC006	8-759-403-44	IC MN1280-S	
IC301	8-752-063-50	IC CXA1477AS	
IC302	8-759-701-75	IC NJM7805FA	
		<COIL>	
L003	1-410-470-11	INDUCTOR 10UH	
L004	1-410-476-11	INDUCTOR 33UH	
L005	1-410-470-11	INDUCTOR 10UH	
L006	1-410-470-11	INDUCTOR 10UH	
L302	1-408-413-00	INDUCTOR 22UH	(KP-41T15)
L303	1-408-416-00	INDUCTOR 39UH	(KP-41T15)
L304	1-410-468-11	INDUCTOR 6.8UH	
		<TRANSISTOR>	
Q001	8-729-216-22	TRANSISTOR 2SA1162-G	
Q002	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q003	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q004	8-729-216-22	TRANSISTOR 2SA1162-G	
Q005	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q006	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q007	8-729-216-22	TRANSISTOR 2SA1162-G	
Q008	8-729-216-22	TRANSISTOR 2SA1162-G	
Q009	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q010	8-729-216-22	TRANSISTOR 2SA1162-G	
Q011	8-729-216-22	TRANSISTOR 2SA1162-G	
Q012	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q017	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q018	8-729-216-22	TRANSISTOR 2SA1162-G	
Q019	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q301	8-729-216-22	TRANSISTOR 2SA1162-G	
Q302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q303	8-729-216-22	TRANSISTOR 2SA1162-G	
Q304	8-729-216-22	TRANSISTOR 2SA1162-G	
Q305	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q307	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G	
Q309	8-729-216-22	TRANSISTOR 2SA1162-G	
Q310	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KP-41T15)
Q311	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q312	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KP-41T15)
Q313	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q314	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KP-41T15)
Q315	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KP-41T15)
Q316	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KP-41T15)
Q317	8-729-216-22	TRANSISTOR 2SA1162-G	(KP-41T15)
Q318	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KP-41T15)
Q319	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KP-41T15)
Q320	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KP-41T15)
Q321	8-729-120-28	TRANSISTOR 2SC1623-L5L6	(KP-41T15)
Q322	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		<RESISTOR>	
R001	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R002	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R003	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R004	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R005	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R006	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R007	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R008	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R009	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R010	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R011	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R012	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R013	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R014	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R015	1-216-033-00	METAL GLAZE 220 5% 1/10W	

M

REF.NO.	PART NO.	DESCRIPTION				REMARK
R018	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R019	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R020	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R021	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R022	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R023	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R024	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R025	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R026	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R027	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R028	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R029	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R031	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R032	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R033	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R034	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R035	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R036	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R037	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R038	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R039	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R040	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R041	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R042	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R043	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R044	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R045	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R046	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R047	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R048	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R049	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R050	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R051	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R052	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R054	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R055	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R056	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R057	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R058	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R059	1-216-295-00	CONDUCTOR, CHIP				
R060	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R062	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R063	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R064	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R065	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R066	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R067	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R068	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R069	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R071	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R072	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R073	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R074	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R075	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R076	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R077	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R078	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R079	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R080	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R081	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R082	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R083	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R084	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R085	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R086	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R087	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R088	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R089	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R090	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R101	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R102	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R103	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R104	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R106	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R107	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R108	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R109	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R110	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R111	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R112	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R113	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R114	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R115	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R116	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R117	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R118	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R119	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R120	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R300	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R301	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R302	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R303	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R304	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R305	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R306	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R307	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R308	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R309	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R310	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R311	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R312	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R313	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R314	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R315	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R317	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R318	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R319	1-216-190-00	METAL GLAZE	470	5%	1/8W	
R320	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R321	1-216-190-00	METAL GLAZE	470	5%	1/8W	
R323	1-216-295-00	CONDUCTOR, CHIP				
R324	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R325	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R326	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R327	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R328	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R329	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R330	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R331	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R332	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R333	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R335	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R336	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R337	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R338	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R339	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W	
R340	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R341	1-216-033-00	METAL GLAZE	220	5%	1/10W	

M G

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R342	1-216-033-00	METAL GLAZE	220	5%	1/10W
R343	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R344	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R345	1-216-025-00	METAL GLAZE	100	5%	1/10W
R346	1-216-037-00	METAL GLAZE	330	5%	1/10W
R347	1-216-041-00	METAL GLAZE	470	5%	1/10W
R348	1-216-049-00	METAL GLAZE	1K	5%	1/10W (KP-41T15)
R349	1-216-033-00	METAL GLAZE	220	5%	1/10W
R350	1-216-033-00	METAL GLAZE	220	5%	1/10W
R351	1-216-033-00	METAL GLAZE	220	5%	1/10W
R352	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W (KP-41T15)
R353	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W (KP-41T15)
R354	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R355	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R356	1-216-031-00	METAL GLAZE	180	5%	1/10W (KP-41T15)
R357	1-216-031-00	METAL GLAZE	180	5%	1/10W (KP-41T15)
R358	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R359	1-216-037-00	METAL GLAZE	330	5%	1/10W (KP-41T15)
R360	1-216-035-00	METAL GLAZE	270	5%	1/10W
R361	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R362	1-216-035-00	METAL GLAZE	270	5%	1/10W (KP-41T15)
R363	1-216-049-00	METAL GLAZE	1K	5%	1/10W (KP-41T15)
R364	1-216-025-00	METAL GLAZE	100	5%	1/10W (KP-41T15)
R366	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W (KP-41T15)
R367	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W (KP-41T15)
R368	1-216-025-00	METAL GLAZE	100	5%	1/10W (KP-41T15)
R369	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W (KP-41T15)
R370	1-216-033-00	METAL GLAZE	220	5%	1/10W
R371	1-216-049-00	METAL GLAZE	1K	5%	1/10W (KP-41T15)
R372	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W (KP-41T15)
R373	1-216-035-00	METAL GLAZE	270	5%	1/10W (KP-41T15)
R374	1-216-085-00	METAL GLAZE	33K	5%	1/10W (KP-41T15)
R375	1-216-075-00	METAL GLAZE	12K	5%	1/10W (KP-41T15)
R376	1-216-093-00	METAL GLAZE	68K	5%	1/10W (KP-41T15)
R377	1-216-043-91	METAL GLAZE	560	5%	1/10W (KP-41T15)
R378	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W (KP-41T15)
R379	1-216-083-00	METAL GLAZE	27K	5%	1/10W (KP-41T15)
R380	1-216-097-00	METAL GLAZE	100K	5%	1/10W (KP-41T15)
R381	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W (KP-41T15)
R382	1-216-085-00	METAL GLAZE	33K	5%	1/10W
					(KP-41T15)
R383	1-216-043-91	METAL GLAZE	560	5%	1/10W (KP-41T15)
R384	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W (KP-41T15)
R385	1-216-085-00	METAL GLAZE	33K	5%	1/10W (KP-41T15)
R386	1-216-121-00	METAL GLAZE	1M	5%	1/10W (KP-41T15)
R387	1-216-049-00	METAL GLAZE	1K	5%	1/10W (KP-41T15)
R388	1-216-295-00	CONDUCTOR, CHIP			(KP-41T15)
R389	1-216-033-00	METAL GLAZE	220	5%	1/10W (KP-41T15)
R390	1-216-033-00	METAL GLAZE	220	5%	1/10W
R391	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R392	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
		<CRYSTAL>			
X001	1-579-917-11	VIBRATOR, CRYSTAL			
X301	1-577-611-11	OSCILALTOR, CERAMIC			
X302	1-567-505-11	OSCILLATOR, CRYSTAL			
		**********			
	*A-1316-212-A	G BOARD, COMPLETE			
		**********			
	*4-047-936-01	PLATE, SHIELD, PIT			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C601	⚠1-136-311-51	FILM	0.47MF	20%	125V
C602	⚠1-164-486-51	CERAMIC	0.0022MF	20%	400V
C603	⚠1-164-486-51	CERAMIC	0.0022MF	20%	400V
C604	⚠1-125-692-11	ELECT(BLOCK)	820MF	20%	200V
C605	⚠1-125-692-11	ELECT(BLOCK)	820MF	20%	200V
C608	1-164-645-11	CERAMIC	1000PF	10%	500V
C609	1-164-645-11	CERAMIC	1000PF	10%	500V
C610	1-136-173-00	FILM	0.47MF	5%	50V
C611	1-136-171-00	FILM	0.33MF	5%	50V
C612	1-136-173-00	FILM	0.47MF	5%	50V
C613	1-136-171-00	FILM	0.33MF	5%	50V
C614	1-164-735-11	CAP, CERAMIC	1500PF		
C615	1-129-720-00	FILM	0.033MF	5%	630V
C616	⚠1-136-311-51	FILM	0.47MF	20%	125V
C618	⚠1-161-740-00	CERAMIC	470PF	10%	400V
C619	⚠1-161-740-00	CERAMIC	470PF	10%	400V
C651	1-128-548-11	ELECT	4700MF	20%	25V
C652	1-128-548-11	ELECT	4700MF	20%	25V
C653	1-162-318-11	CERAMIC	0.001MF	10%	500V
C656	1-128-548-11	ELECT	4700MF	20%	25V
C657	1-126-926-11	ELECT	1000MF	20%	10V
C658	1-126-768-11	ELECT	2200MF	20%	16V
C659	1-126-944-11	ELECT	3300MF	20%	25V
C660	1-164-644-11	CERAMIC	330PF	10%	500V
C661	1-123-024-21	ELECT	33MF		160V
C662	1-107-636-11	ELECT	10MF	20%	160V
C663	1-126-948-11	ELECT	100MF	20%	35V
C664	1-126-235-11	ELECT	100MF	20%	6.3V
C665	1-126-964-11	ELECT	10MF	20%	50V
C667	1-126-941-11	ELECT	470MF	20%	25V

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

G

REF.NO.	PART NO.	DESCRIPTION				REMARK
C668	1-104-664-11	ELECT	47MF	20%	25V	
C669	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C670	1-104-664-11	ELECT	47MF	20%	25V	
C671	1-104-664-11	ELECT	47MF	20%	25V	
C672	1-104-665-11	ELECT	100MF	20%	25V	
C673	1-104-664-11	ELECT	47MF	20%	25V	
C674	1-104-664-11	ELECT	47MF	20%	25V	
C675	1-104-664-11	ELECT	47MF	20%	25V	
C676	1-104-664-11	ELECT	47MF	20%	25V	
C677	1-125-473-11	ELECT(BLOCK)	1000MF	20%	160V	
C678	1-107-635-11	ELECT	4.7MF	20%	160V	
C679	1-164-644-11	CERAMIC	330PF	10%	500V	
C680	1-124-903-11	ELECT	1MF	20%	50V	
C682	1-124-903-11	ELECT	1MF	20%	50V	
C683	1-107-635-11	ELECT	4.7MF	20%	160V	
C690	1-126-934-11	ELECT	220MF	20%	16V	

<CONNECTOR>

CN606	1-695-915-11	TAB (CONTACT)	
CN615	1-695-915-11	TAB (CONTACT)	
CN616	*1-564-507-11	PLUG, CONNECTOR 4P	
CN617	*1-580-843-11	PIN, CONNECTOR (POWER)	
CN624	*1-564-507-11	PLUG, CONNECTOR 4P	
CN625	*1-564-513-11	PLUG, CONNECTOR 10P	
CN626	*1-564-506-11	PLUG, CONNECTOR 3P	
CN653	*1-564-507-11	PLUG, CONNECTOR 4P	
CN681	*1-573-986-11	PIN, CONNECTOR (PC BOARD) 5P	

<DIODE>

D601	⚠8-719-052-29	DIODE LN4SBG0-F	
D604	8-719-911-19	DIODE 1SS119-25	
D605	8-719-911-19	DIODE 1SS119-25	
D606	8-719-911-19	DIODE 1SS119-25	
D607	8-719-911-19	DIODE 1SS119-25	
D608	8-719-911-19	DIODE 1SS119-25	
D609	8-719-911-19	DIODE 1SS119-25	
D610	8-719-911-19	DIODE 1SS119-25	
D611	8-719-911-19	DIODE 1SS119-25	
D651	8-719-052-91	DIODE D4SBS4-F	
D655	8-719-052-92	DIODE D10SBS4F	
D656	8-719-022-97	DIODE S2S4MF	
D657	8-719-022-97	DIODE S2S4MF	
D658	8-719-022-97	DIODE S2S4MF	
D659	8-719-022-97	DIODE S2S4MF	
D660	8-719-052-86	DIODE D2L40-TA	
D661	8-719-052-86	DIODE D2L40-TA	
D662	8-719-052-31	DIODE D1NL40-TR2	
D663	8-719-052-31	DIODE D1NL40-TR2	
D664	8-719-510-26	DIODE D1NL20	
D665	8-719-911-19	DIODE 1SS119-25	
D666	8-719-110-58	DIODE RD22ESB3	
D667	8-719-110-22	DIODE RD11ESB2	
D669	8-719-911-19	DIODE 1SS119-25	
D670	8-719-110-41	DIODE RD15ESB2	
D671	8-719-911-19	DIODE 1SS119-25	
D672	8-719-109-54	DIODE RD2.2ESB2	
D673	8-719-110-49	DIODE RD18ESB2	
D674	8-719-911-19	DIODE 1SS119-25	
D675	8-719-109-85	DIODE RD5.1ESB2	
D676	8-719-911-19	DIODE 1SS119-25	
D677	8-719-911-19	DIODE 1SS119-25	
D678	8-719-911-19	DIODE 1SS119-25	
D679	8-719-911-19	DIODE 1SS119-25	
D680	8-719-200-82	DIODE 11ES2	
D681	8-719-200-82	DIODE 11ES2	
D682	8-719-200-82	DIODE 11ES2	
D683	8-719-200-82	DIODE 11ES2	
D685	8-719-911-19	DIODE 1SS119-25	
D686	8-719-911-19	DIODE 1SS119-25	
D687	8-719-109-51	DIODE RD2.0ESB2	
D688	8-719-911-19	DIODE 1SS119-25	
D689	8-719-911-19	DIODE 1SS119-25	
D690	8-719-109-89	DIODE RD5.6ESB2	
D691	8-719-911-19	DIODE 1SS119-25	
D693	8-719-911-19	DIODE 1SS119-25	

<FUSE>

F601	⚠1-576-193-11	FUSE (6.3A/125V)	
	1-533-223-11	CLIP, FUSE; F601	

<FERRITE BEAD>

FB651	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB652	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	

<IC>

IC651	⚠1-810-051-11	POWER MODULE DM-48	
IC652	8-759-701-79	IC NJM7812FA	

<COIL>

L651	1-403-588-11	CIL, CHOKE 22UH	
L652	1-403-588-11	CIL, CHOKE 22UH	
L653	1-412-519-11	INDUCTOR 3.3UH	
L654	1-403-588-11	CIL, CHOKE 22UH	
L655	1-403-588-11	CIL, CHOKE 22UH	
L656	1-412-519-11	INDUCTOR 3.3UH	
L657	1-403-588-11	CIL, CHOKE 22UH	
L658	1-403-588-11	CIL, CHOKE 22UH	

<TRANSISTOR>

Q601	8-729-019-49	TRANSISTOR 2SC4834M	
Q602	8-729-019-49	TRANSISTOR 2SC4834M	
Q651	8-729-820-82	TRANSISTOR 2SA1208-S	
Q652	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q653	8-729-230-45	TRANSISTOR 2SC2458-YGR	
Q654	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q655	8-729-230-45	TRANSISTOR 2SC2458-YGR	
Q656	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q657	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q658	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q659	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q660	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q661	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q662	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q663	8-729-119-76	TRANSISTOR 2SA1175-HFE	

<RESISTOR>

R602	⚠1-202-888-91	SOLID	2.2M	20%	1/2W	
R603	⚠1-205-997-11	WIREWOUND	2.2	5%	10W	
R604	⚠1-247-891-91	CARBON	330K	5%	1/4W	
R605	⚠1-247-891-91	CARBON	330K	5%	1/4W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

G CR

REF.NO.	PART NO.	DESCRIPTION				REMARK
R606 ⚠	1-202-933-61	FUSIBLE	0.1	10%	1/2W	F
R607	1-247-891-00	CARBON	330K	5%	1/4W	
R608	1-247-891-00	CARBON	330K	5%	1/4W	
R609	1-216-369-00	METAL OXIDE	1	5%	2W	F
R610	1-247-891-00	CARBON	330K	5%	1/4W	
R611	1-247-891-00	CARBON	330K	5%	1/4W	
R612	1-216-369-00	METAL OXIDE	1	5%	2W	F
R613	1-247-791-91	CARBON	22	5%	1/4W	
R614	1-247-791-91	CARBON	22	5%	1/4W	
R615	1-247-791-91	CARBON	22	5%	1/4W	
R616	1-247-791-91	CARBON	22	5%	1/4W	
R631	1-247-863-91	CARBON	22K	5%	1/4W	
R632	1-247-807-31	CARBON	100	5%	1/4W	
R633	1-247-807-31	CARBON	100	5%	1/4W	
R634	1-249-417-11	CARBON	1K	5%	1/4W	
R635	1-249-425-11	CARBON	4.7K	5%	1/4W	
R636	1-249-413-11	CARBON	470	5%	1/4W	
R651	1-216-370-11	METAL OXIDE	1.2	5%	2W	F
R653	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R654	1-215-473-00	METAL	150K	1%	1/4W	
R655	1-249-441-11	CARBON	100K	5%	1/4W	
R656	1-216-369-00	METAL OXIDE	1	5%	2W	F
R657	1-249-429-11	CARBON	10K	5%	1/4W	
R658	1-247-883-00	CARBON	150K	5%	1/4W	
R659	1-249-417-11	CARBON	1K	5%	1/4W	F
R660	1-249-417-11	CARBON	1K	5%	1/4W	
R661	1-215-471-00	METAL	120K	1%	1/4W	
R662 ⚠	1-215-452-91	METAL	20K	1%	1/4W	
R664	1-249-429-11	CARBON	10K	5%	1/4W	
R665	1-249-425-11	CARBON	4.7K	5%	1/4W	
R666	1-249-429-11	CARBON	10K	5%	1/4W	
R667	1-249-429-11	CARBON	10K	5%	1/4W	
R670	1-247-895-00	CARBON	470K	5%	1/4W	
R672	1-247-807-31	CARBON	100	5%	1/4W	
R673	1-249-423-11	CARBON	3.3K	5%	1/4W	
R674	1-249-413-11	CARBON	470	5%	1/4W	
R675	1-249-429-11	CARBON	10K	5%	1/4W	
R676	1-249-421-11	CARBON	2.2K	5%	1/4W	
R677	1-249-417-11	CARBON	1K	5%	1/4W	
R678	1-249-423-11	CARBON	3.3K	5%	1/4W	
R679	1-249-423-11	CARBON	3.3K	5%	1/4W	
R680	1-249-413-11	CARBON	470	5%	1/4W	
R681	1-249-425-11	CARBON	4.7K	5%	1/4W	
R682	1-249-403-11	CARBON	68	5%	1/4W	
R683	1-249-417-11	CARBON	1K	5%	1/4W	
R684	1-249-417-11	CARBON	1K	5%	1/4W	
R685	1-247-863-91	CARBON	22K	5%	1/4W	
R686	1-249-429-11	CARBON	10K	5%	1/4W	
R687	1-249-423-11	CARBON	3.3K	5%	1/4W	
R688	1-249-423-11	CARBON	3.3K	5%	1/4W	
R689	1-249-429-11	CARBON	10K	5%	1/4W	
R690	1-247-863-91	CARBON	22K	5%	1/4W	
R691	1-249-417-11	CARBON	1K	5%	1/4W	
R693	1-249-425-11	CARBON	4.7K	5%	1/4W	
R694	1-249-425-11	CARBON	4.7K	5%	1/4W	
R695	1-249-429-11	CARBON	10K	5%	1/4W	
R697	1-249-413-11	CARBON	470	5%	1/4W	
R698	1-249-429-11	CARBON	10K	5%	1/4W	
R699	1-249-417-11	CARBON	1K	5%	1/4W	

<RELAY>

RY601 ⚠	1-755-032-11	RELAY
RY602 ⚠	1-755-032-11	RELAY

<TRANSFORMER>

T601 ⚠	1-427-850-11	TRANSFORMER, LINE FILTER
T602 ⚠	1-427-863-11	TRANSFORMER, CONVERTER (PIT)
T603 ⚠	1-427-865-11	TRANSFORMER, POWER
T604 ⚠	1-427-864-11	TRANSFORMER, CONVERTER (PRT)
T605 ⚠	1-427-850-11	TRANSFORMER, LINE FILTER

****

*A-1331-408-A CR BOARD, COMPLETE
****

<CAPACITOR>

C701	1-104-664-11	ELECT	47MF	20%	25V
C702	1-107-662-11	ELECT	22MF	20%	250V
C703	1-161-754-00	CERAMIC	0.001MF	10%	2KV
C704	1-126-768-11	ELECT	2200MF	20%	16V
C705	1-102-050-00	CERAMIC	0.01MF	99%	500V
C706	1-102-965-00	CERAMIC	39PF	5%	50V
C707	1-102-129-00	CERAMIC	0.01MF	10%	50V
C708	1-104-664-11	ELECT	47MF	20%	25V
C709	1-107-651-11	ELECT	4.7MF	20%	250V
C710	1-102-157-00	CERAMIC	560PF	10%	500V
C714	1-162-115-00	CERAMIC	330PF	10%	2KV

<CONNECTOR>

CN701	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P
CN702	*1-564-510-11	PLUG, CONNECTOR 7P
CN703	*1-564-512-11	PLUG, CONNECTOR 9P
CN704	*1-564-512-11	PLUG, CONNECTOR 9P
CN705	*1-564-511-11	PLUG, CONNECTOR 8P
CN706	1-695-915-11	TAB (CONTACT)
CN708 ⚠	1-251-179-11	SOCKET, PICTURE TUBE
CN709	*1-564-506-11	PLUG, CONNECTOR 3P

<DIODE>

D701	8-719-911-19	DIODE 1SS119-25
D702	8-719-911-19	DIODE 1SS119-25
D703	8-719-911-19	DIODE 1SS119-25
D704	8-719-110-36	DIODE RD13ESB2
D705	8-719-987-87	DIODE ERA82-009
D706	8-719-911-19	DIODE 1SS119-25
D707	8-719-110-36	DIODE RD13ESB2
D708	8-719-901-83	DIODE 1SS83
D710	8-719-109-89	DIODE RD5.6ESB2
D711	8-719-911-19	DIODE 1SS119-25
D713	8-719-510-48	DIODE D1N20R
D715	8-719-901-83	DIODE 1SS83
D716	8-719-110-36	DIODE RD13ESB2
D717	8-719-110-36	DIODE RD13ESB2

<IC>

IC701	8-759-168-72	IC TDA6101Q

<COIL>

L701	1-408-429-00	INDUCTOR 470UH
L703	1-408-159-00	COIL, SPOOK CHOKE 3.3UH

CR CG CB

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
		<NEON LAMP>				
NL701	1-519-108-XX	LAMP, NEON				
		<TRANSISTOR>				
Q701	8-729-119-76	TRANSISTOR 2SA1175-HFE				
		<RESISTOR>				
R701	1-215-411-00	METAL	390	1%	1/4W	
R702	1-215-414-00	METAL	510	1%	1/4W	
R704	1-202-847-00	SOLID	560K	20%	1/2W	
R706	1-249-407-11	CARBON	150	5%	1/4W	
R707	1-215-423-00	METAL	1.2K	1%	1/4W	
R708	1-202-883-11	SOLID	680K	20%	1/2W	
R709	1-215-437-00	METAL	4.7K	1%	1/4W	
R710	1-215-427-00	METAL	1.8K	1%	1/4W	
R711	1-215-427-00	METAL	1.8K	1%	1/4W	
R712	1-215-903-11	METAL OXIDE	68K	5%	2W	F
R713	1-202-818-00	SOLID	1K	20%	1/2W	
R714	1-202-818-00	SOLID	1K	20%	1/2W	
R715	1-249-436-11	CARBON	39K	5%	1/4W	
R716	1-249-437-11	CARBON	47K	5%	1/4W	
R718	1-249-417-11	CARBON	1K	5%	1/4W	
R719	1-247-807-31	CARBON	100	5%	1/4W	
R720	1-249-437-11	CARBON	47K	5%	1/4W	
R721	1-202-549-00	SOLID	100	20%	1/2W	
R722	1-202-549-00	SOLID	100	20%	1/2W	
		<SPARK GAP>				
SG701	1-519-422-11	GAP, SPARK				
SG702	1-519-422-11	GAP, SPARK				
SG703	1-519-422-11	GAP, SPARK				
**********						
	*A-1331-409-A	CG BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C731	1-161-754-00	CERAMIC	0.001MF	10%	2KV	
C732	1-107-662-11	ELECT	22MF	20%	250V	
C733	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C736	1-126-964-11	ELECT	10MF	20%	50V	
C738	1-107-651-11	ELECT	4.7MF	20%	250V	
C739	1-164-066-11	CERAMIC	68PF	5%	50V	
C740	1-126-964-11	ELECT	10MF	20%	50V	
C741	1-102-157-00	CERAMIC	560PF	10%	500V	
C742	1-162-115-00	CERAMIC	330PF	10%	2KV	
		<CONNECTOR>				
CN731	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
CN732	*1-564-512-11	PLUG, CONNECTOR 9P				
CN733	*1-564-512-11	PLUG, CONNECTOR 9P				
CN734	*1-564-511-11	PLUG, CONNECTOR 8P				
CN735	*1-564-509-11	PLUG, CONNECTOR 6P				
CN736	1-695-915-11	TAB (CONTACT)				
CN738⚠	1-251-179-11	SOCKET, PICTURE TUBE				
		<DIODE>				
D731	8-719-110-36	DIODE RD13ESB2				
D732	8-719-901-83	DIODE 1SS83				
D735	8-719-901-83	DIODE 1SS83				
D736	8-719-510-48	DIODE D1N20R				
D737	8-719-110-36	DIODE RD13ESB2				
		<IC>				
IC731	8-759-168-72	IC TDA6101Q				
		<COIL>				
L731	1-408-429-00	INDUCTOR	470UH			
L732	1-408-159-00	COIL, SPOOK CHOKE	3.3UH			
		<NEON LAMP>				
NL731	1-519-108-XX	LAMP, NEON				
		<RESISTOR>				
R731	1-202-847-00	SOLID	560K	20%	1/2W	
R733	1-202-883-11	SOLID	680K	20%	1/2W	
R734	1-202-818-00	SOLID	1K	20%	1/2W	
R735	1-249-407-11	CARBON	150	5%	1/4W	
R736	1-249-441-11	CARBON	100K	5%	1/4W	
R737	1-202-818-00	SOLID	1K	20%	1/2W	
R738	1-202-549-00	SOLID	100	20%	1/2W	
R739	1-215-420-00	METAL	910	1%	1/4W	
R740	1-215-427-00	METAL	1.8K	1%	1/4W	
R741	1-249-437-11	CARBON	47K	5%	1/4W	
R742	1-215-903-11	METAL OXIDE	68K	5%	2W	F
		<SPARK GAP>				
SG731	1-519-422-11	GAP, SPARK				
SG732	1-519-422-11	GAP, SPARK				
SG733	1-519-422-11	GAP, SPARK				
**********						
	*A-1331-410-A	CB BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C761	1-161-754-00	CERAMIC	0.001MF	10%	2KV	
C762	1-107-662-11	ELECT	22MF	20%	250V	
C763	1-102-050-00	CERAMIC	0.01MF	99%	500V	
C766	1-107-651-11	ELECT	4.7MF	20%	250V	
C769	1-164-066-11	CERAMIC	68PF	5%	50V	
C770	1-126-964-11	ELECT	10MF	20%	50V	
C771	1-102-157-00	CERAMIC	560PF	10%	500V	
C772	1-162-115-00	CERAMIC	330PF	10%	2KV	
		<CONNECTOR>				
CN761	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
CN762	*1-564-512-11	PLUG, CONNECTOR 9P				
CN763	*1-564-509-11	PLUG, CONNECTOR 6P				
CN766	1-695-915-11	TAB (CONTACT)				
CN768⚠	1-251-179-11	SOCKET, PICTURE TUBE				
		<DIODE>				

CB E

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
D761	8-719-110-36	DIODE RD13ESB2				
D762	8-719-901-83	DIODE 1SS83				
D763	8-719-911-19	DIODE 1SS119-25				
D764	8-719-110-36	DIODE RD13ESB2				
D765	8-719-110-36	DIODE RD13ESB2				
D767	8-719-901-83	DIODE 1SS83				
D768	8-719-510-48	DIODE D1N20R				
D769	8-719-110-36	DIODE RD13ESB2				
		<IC>				
IC761	8-759-168-72	IC TDA6101Q				
		<COIL>				
L761	1-408-429-00	INDUCTOR 470UH				
L762	1-408-159-00	COIL, SPOOK CHOKE 3.3UH				
		<NEON LAMP>				
NL760	1-519-108-XX	LAMP, NEON				
		<RESISTOR>				
R761	1-202-847-00	SOLID	560K	20%	1/2W	
R763	1-202-883-11	SOLID	680K	20%	1/2W	
R764	1-202-818-00	SOLID	1K	20%	1/2W	
R767	1-202-818-00	SOLID	1K	20%	1/2W	
R768	1-202-549-00	SOLID	100	20%	1/2W	
R769	1-215-421-00	METAL	1K	1%	1/4W	
R770	1-249-426-11	CARBON	5.6K	5%	1/4W	
R771	1-215-427-00	METAL	1.8K	1%	1/4W	
R773	1-215-903-11	METAL OXIDE	68K	5%	2W	F
R774	1-249-407-11	CARBON	150	5%	1/4W	
R775	1-202-549-00	SOLID	100	20%	1/2W	
		<SPARK GAP>				
SG761	1-519-422-11	GAP, SPARK				
SG762	1-519-422-11	GAP, SPARK				
SG763	1-519-422-11	GAP, SPARK				
**********						
	*A-1341-885-A	B BOARD, COMPLETE				
		**********				
	1-923-505-05	WIRE UL1007 AWG24 50MM GRY				
	4-365-216-00	SPACER, MICA				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C801	1-110-626-11	ELECT	330MF	20%	160V	
C802	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C803	1-110-626-11	ELECT	330MF	20%	160V	
C805	1-136-173-00	FILM	0.47MF	5%	50V	
C806	1-102-030-00	CERAMIC	330PF	10%	500V	
C807	1-106-387-00	MYLAR	0.068MF	10%	200V	
C808	1-107-636-11	ELECT	10MF	20%	160V	
C809	1-104-664-11	ELECT	47MF	20%	25V	
C810	1-130-481-00	FILM	0.0068MF	5%	50V	
C811	1-137-475-11	FILM	2.2MF	10%	250V	
C812	1-128-551-11	ELECT	22MF	20%	50V	

REF.NO.	PART NO.	DESCRIPTION			REMARK
C814	1-124-122-11	ELECT	100MF	20%	50V
C815	1-162-114-00	CERAMIC	0.0047MF		2KV
C818 ⚠	1-109-833-11	FILM	0.0145MF	3%	1.8KV
C819	1-130-489-00	FILM	0.033MF	5%	50V
C820	1-124-902-00	ELECT	0.47MF	20%	50V
C823	1-136-601-11	FILM	0.01MF	5%	630V
C824	1-126-964-11	ELECT	10MF	20%	50V
C825	1-162-318-11	CERAMIC	0.001MF	10%	500V
C826	1-130-467-00	FILM	470PF	5%	50V
C827	1-107-652-11	ELECT	10MF	20%	250V
C828	1-111-036-91	ELECT	470MF	20%	16V
C830	1-107-368-11	FILM	0.047MF	10%	200V
C831	1-126-934-11	ELECT	220MF	20%	16V
C832	1-124-927-11	ELECT	4.7MF	20%	50V
C901	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C902	1-137-370-11	FILM	0.01MF	5%	50V
C903	1-137-361-11	FILM	330PF	5%	50V
C904	1-137-358-11	FILM	0.0001MF	5%	50V
C905	1-104-665-11	ELECT	100MF	20%	25V
C906	1-137-370-11	FILM	0.01MF	5%	50V
C907	1-104-665-11	ELECT	100MF	20%	25V
C908	1-137-361-11	FILM	330PF	5%	50V
C909	1-124-903-11	ELECT	1MF	20%	50V
C911	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C912	1-124-903-11	ELECT	1MF	20%	50V
C913	1-124-903-11	ELECT	1MF	20%	50V
C915	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C916	1-124-927-11	ELECT	4.7MF	20%	50V
C917	1-126-964-11	ELECT	10MF	20%	50V
C918	1-137-364-11	FILM	0.001MF	5%	50V
C919	1-126-964-11	ELECT	10MF	20%	50V
C920	1-124-902-00	ELECT	0.47MF	20%	50V
C921	1-126-964-11	ELECT	10MF	20%	50V
C923	1-126-964-11	ELECT	10MF	20%	50V
C924	1-126-940-11	ELECT	330MF	20%	16V
C925	1-137-372-11	FILM	0.022MF	5%	50V
C926	1-104-665-11	ELECT	100MF	20%	25V
C927	1-137-364-11	FILM	0.001MF	5%	50V
C929	1-137-416-11	FILM	0.01MF	10%	100V
C930	1-137-364-11	FILM	0.001MF	5%	50V
C931	1-126-967-11	ELECT	47MF	20%	50V
C932	1-124-903-11	ELECT	1MF	20%	50V
C934	1-137-370-11	FILM	0.01MF	5%	50V
C935	1-137-399-11	FILM	0.1MF	10%	100V
C936	1-126-964-11	ELECT	10MF	20%	50V
C937	1-126-964-11	ELECT	10MF	20%	50V
C938	1-126-940-11	ELECT	330MF	20%	16V
C939	1-126-964-11	ELECT	10MF	20%	50V
C940	1-104-663-11	ELECT	33MF	20%	25V
C941	1-126-964-11	ELECT	10MF	20%	50V
C942	1-104-663-11	ELECT	33MF	20%	25V
C943	1-128-551-11	ELECT	22MF	20%	50V
C944	1-126-964-11	ELECT	10MF	20%	50V
C945	1-126-964-11	ELECT	10MF	20%	50V
C946	1-124-925-11	ELECT	2.2MF	20%	50V
C947	1-104-665-11	ELECT	100MF	20%	25V
C948	1-104-665-11	ELECT	100MF	20%	25V
C949	1-126-964-11	ELECT	10MF	20%	50V
C950	1-126-964-11	ELECT	10MF	20%	50V
C951	1-124-903-11	ELECT	1MF	20%	50V
C953	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C954	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C955	1-126-964-11	ELECT	10MF	20%	50V
C980	1-137-368-11	FILM	0.0047MF	5%	50V

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

E

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<CONDUCTOR CHIP>	
CJ901	1-216-295-00	CONDUCTOR, CHIP	
CJ902	1-216-295-00	CONDUCTOR, CHIP	
		<CONNECTOR>	
CN802	*1-564-510-11	PLUG, CONNECTOR 7P	
CN805	1-695-915-11	TAB (CONTACT)	
CN827	*1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
CN851	*1-564-509-11	PLUG, CONNECTOR 6P	
CN881	*1-573-986-11	PIN, CONNECTOR (PC BOARD) 5P	
CN882	*1-691-135-11	PIN, CONNECTOR (PC BOARD) 4P	
CN884	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P	
CN885	*1-506-371-00	PIN, CONNECTOR 2P	
CN886	*1-506-371-00	PIN, CONNECTOR 2P	
CN904	*1-564-507-11	PLUG, CONNECTOR 4P	
		<DIODE>	
D801	8-719-109-85	DIODE RD5.1ESB2	
D802	8-719-404-46	DIODE MA110	
D803	8-719-971-20	DIODE ERC38-06	
D804	8-719-908-03	DIODE GP08D	
D805	8-719-945-80	DIODE ERC06-15S	
D806	8-719-911-19	DIODE 1SS119-25	
D807	8-719-945-80	DIODE ERC06-15S	
D808	8-719-500-71	DIODE D8LC40F	
D809	8-719-911-19	DIODE 1SS119-25	
D810	8-719-945-80	DIODE ERC06-15S	
D811	8-719-920-67	DIODE ERC91-02	
D812	8-719-404-46	DIODE MA110	
D814	8-719-920-67	DIODE ERC91-02	
D816	8-719-404-46	DIODE MA110	
D817	8-719-404-46	DIODE MA110	
D818	8-719-404-46	DIODE MA110	
D819	8-719-105-82	DIODE RD5.1M-B2	
D901	8-719-404-46	DIODE MA110	
D902	8-719-404-46	DIODE MA110	
D904	8-719-404-46	DIODE MA110	
D905	8-719-404-46	DIODE MA110	
D907	8-719-404-46	DIODE MA110	
D908	8-719-105-82	DIODE RD5.1M-B2	
D909	8-719-302-43	DIODE EL1Z	
D911	8-719-105-82	DIODE RD5.1M-B2	
D912	8-719-105-82	DIODE RD5.1M-B2	
D913	8-719-404-46	DIODE MA110	
D914	8-719-404-46	DIODE MA110	
D915	8-719-404-46	DIODE MA110	
D916	8-719-105-57	DIODE RD3.9M-B1	
D917	8-719-404-46	DIODE MA110	
D918	8-719-404-46	DIODE MA110	
D919	8-719-106-81	DIODE RD13M-B3	
D920	8-759-157-40	DIODE UPC574J	
D921	8-719-106-81	DIODE RD13M-B3	
D922	8-719-404-46	DIODE MA110	
D923	8-719-404-46	DIODE MA110	
D924	8-719-404-46	DIODE MA110	
D925	8-719-105-45	DIODE RD3.3M-B1	
D926	8-719-404-46	DIODE MA110	
D927	8-719-105-73	DIODE RD4.7M-B2	
		<FERRITE BEAD>	
FB001	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB002	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
		<IC>	
IC901	8-759-133-90	IC UPC339C	
IC902	8-759-133-90	IC UPC339C	
IC903	8-759-711-28	IC NJM2058D	
IC904	8-759-634-51	IC M5218AP	
IC905	8-759-929-65	IC LM7912CT	
IC906	8-759-701-79	IC NJM7812FA	
		<COIL>	
L801	1-406-665-11	COIL, CHOKE 100UH	
L802	1-406-665-11	COIL, CHOKE 100UH	
L803	1-422-613-11	COIL, AIR CORE	
L804	1-411-286-11	COIL, CHOKE 220UH	
L901	1-408-416-00	INDUCTOR 39UH	
L902	1-408-416-00	INDUCTOR 39UH	
		<NEON LAMP>	
NL802	1-519-108-XX	LAMP, NEON	
		<TRANSISTOR>	
Q801	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q802	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q803	8-729-122-12	TRANSISTOR 2SA1221-L	
Q806	8-729-805-07	TRANSISTOR 2SD1887-CA	
Q807	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q808	8-729-024-30	TRANSISTOR IRFI640LF	
Q809	8-729-823-81	TRANSISTOR 2SC4632LS-CB7	
Q810	8-729-231-55	TRANSISTOR 2SC2878AB	
Q811	8-729-823-81	TRANSISTOR 2SC4632LS-CB7	
Q813	8-729-216-22	TRANSISTOR 2SA1162-G	
Q901	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q902	8-729-140-93	TRANSISTOR 2SB733-34	
Q903	8-729-140-96	TRANSISTOR 2SD774-34	
Q904	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q905	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q906	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q907	8-729-231-55	TRANSISTOR 2SC2878AB	
Q908	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q909	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q910	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q911	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q912	8-729-216-22	TRANSISTOR 2SA1162-G	
Q913	8-729-900-36	TRANSISTOR DTC124ES	
Q914	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q915	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		<RESISTOR>	
R801	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R802	1-249-421-11	CARBON 2.2K 5% 1/4W	
R804	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R805	1-216-435-11	METAL OXIDE 2.7K 5% 1W	F
R806	1-249-431-11	CARBON 15K 5% 1/4W	F
R807	1-260-325-11	CARBON 560 5% 1/2W	
⚠R808		CARBON 1/4W	F

- The components identified by ⚠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

E

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

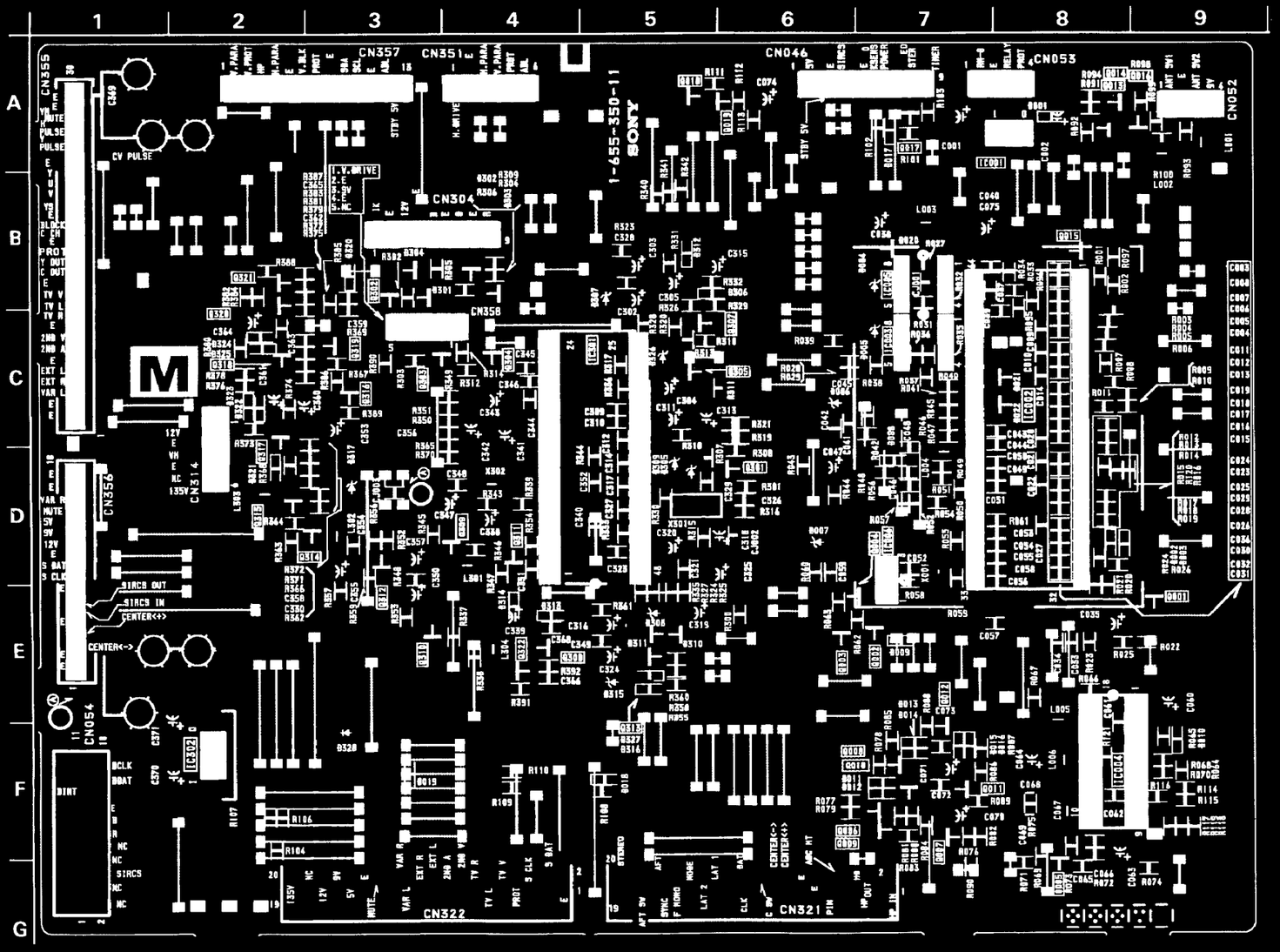
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
⚠R809		CARBON			1/4W	F
R810	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R811	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R812	1-216-395-00	METAL OXIDE	3.3	5%	3W	F
R813	1-216-484-00	METAL OXIDE	3.9K	5%	3W	F
R814	1-215-919-11	METAL OXIDE	2.2K	5%	3W	F
R816	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R817	1-216-395-00	METAL OXIDE	3.3	5%	3W	F
R818	1-249-405-11	CARBON	100	5%	1/4W	F
R819	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R820	1-215-905-11	METAL OXIDE	10	5%	3W	F
R821	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R822	1-215-928-11	METAL OXIDE	68K	5%	3W	F
R823	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R825	1-215-928-11	METAL OXIDE	68K	5%	3W	F
R826	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R830	1-215-928-11	METAL OXIDE	68K	5%	3W	F
R831	1-215-919-11	METAL OXIDE	2.2K	5%	3W	F
R832	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R835	1-249-474-11	CARBON	1	5%	1/2W	F
R836	1-202-818-00	SOLID	1K	20%	1/2W	
R837	1-215-870-11	METAL OXIDE	1.5K	5%	1W	F
R838	1-247-807-31	CARBON	100	5%	1/4W	
R839	1-249-429-11	CARBON	10K	5%	1/4W	F
R841	1-216-491-11	METAL OXIDE	56K	5%	3W	F
R843	1-202-549-00	SOLID	100	20%	1/2W	
R844	1-216-491-11	METAL OXIDE	56K	5%	3W	F
R846	1-202-838-00	SOLID	100K	20%	1/2W	
R847	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R849	1-247-863-91	CARBON	22K	5%	1/4W	
R850	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R851	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R852	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R854	1-249-381-11	CARBON	1	5%	1/4W	F
R855	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R856	1-208-822-11	METAL CHIP	47K	0.50%	1/10W	
R857	1-218-755-11	METAL CHIP	130K	0.50%	1/10W	
R858	1-216-676-11	METAL CHIP	11K	0.50%	1/10W	
R901	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R902	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R903	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R904	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R905	1-247-739-11	CARBON	100	5%	1/2W	F
R906	1-247-739-11	CARBON	100	5%	1/2W	F
R907	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R908	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R909	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R910	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R911	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R912	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R913	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R914	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R915	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R916	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R917	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R918	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R919	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R920	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R921	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R922	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R923	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R924	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R926	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R927	1-249-377-11	CARBON	0.47	5%	1/4W	F
R928	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R929	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R930	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R931	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R932	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R933	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R934	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R935	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R936	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R937	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R938	1-208-810-11	METAL CHIP	15K	0.50%	1/10W	
R939	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R940	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R941	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R942	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R943	1-249-377-11	CARBON	0.47	5%	1/4W	F
R944	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R945	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R946	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R947	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R948	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R950	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R952	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R954	1-214-777-00	METAL	100K	1%	1/4W	
R955	1-214-769-00	METAL	47K	1%	1/4W	
R956	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R957	1-218-754-11	METAL CHIP	120K	0.50%	1/10W	
R958	1-218-756-11	METAL CHIP	150K	0.50%	1/10W	
R959	1-214-757-00	METAL	15K	1%	1/4W	
R960	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R962	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	
R963	1-214-749-00	METAL	6.8K	1%	1/4W	
R964	1-214-757-00	METAL	15K	1%	1/4W	
R965	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R966	1-214-757-00	METAL	15K	1%	1/4W	
R967	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R968	1-214-751-00	METAL	8.2K	1%	1/4W	
R969	1-214-731-00	METAL	1.2K	1%	1/4W	
R970	1-214-757-00	METAL	15K	1%	1/4W	
R971	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R972	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R973	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R974	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R975	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R976	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R977	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R978	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R979	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R980	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R981	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R982	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
⚠R983		METAL GLAZE			1/10W	
R984	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R985	1-208-812-11	METAL CHIP	18K	0.50%	1/10W	
R986	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R987	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
⚠R988		METAL GLAZE			1/10W	
R989	1-216-462-00	METAL OXIDE	8.2K	5%	2W	F
R990	1-215-897-11	METAL OXIDE	6.8K	5%	2W	F
R991	1-208-803-11	METAL CHIP	7.5K	0.50%	1/10W	
R992	1-249-431-11	CARBON	15K	5%	1/4W	
R993	1-249-431-11	CARBON	15K	5%	1/4W	
R994	1-247-807-31	CARBON	100	5%	1/4W	

• The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
Should replacement be required, replace only with the value originally used.

M [YCJ/MICRO COM, CAPTION VISION]

– M BOARD –



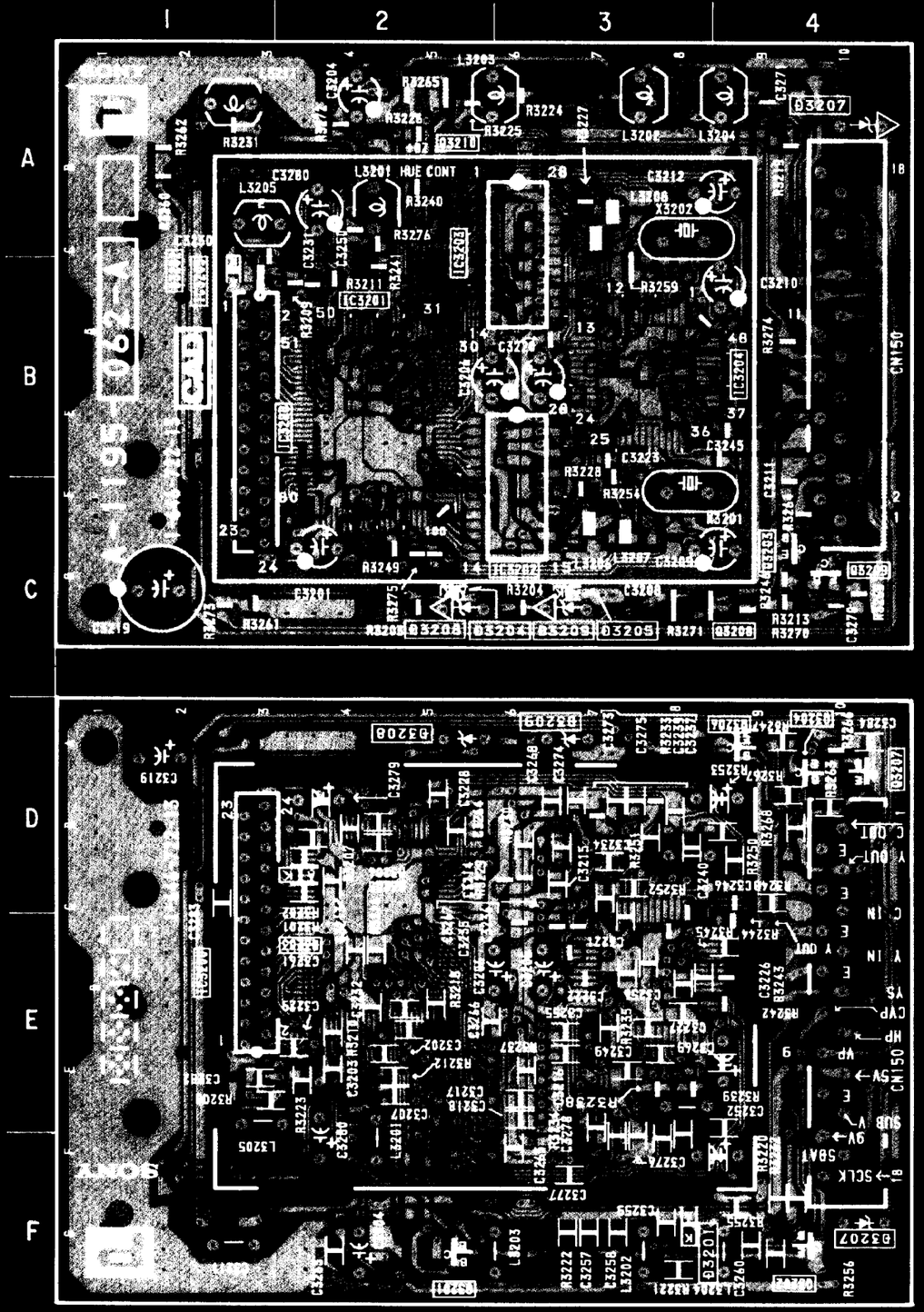
M BOARD

IC		DIODE	
IC001	A – 8	D001	A – 8
IC002	C – 8	D002	D – 8
IC003	C – 7	D003	D – 9
IC004	F – 8	D004	B – 7
IC005	B – 7	D005	C – 7
IC006	E – 7	D006	C – 6
IC301	C – 5	D007	D – 6
IC302	F – 2	D008	D – 7
TRANSISTOR		D009	E – 7
Q001	E – 9	D010	F – 9
Q002	E – 7	D011	F – 7
Q003	E – 6	D012	F – 7
Q004	E – 7	D013	F – 7
Q005	G – 8	D014	F – 7
Q006	F – 7	D015	F – 7
Q007	F – 7	D016	F – 7
Q008	F – 7	D017	A – 7
Q009	F – 7	D018	F – 5
Q010	F – 7	D019	F – 3
Q011	F – 7	D020	B – 7
Q012	F – 7	D305	D – 5
Q017	A – 7	D307	C – 5
Q018	A – 5	D308	E – 5
Q019	A – 6	D309	D – 5
Q301	D – 6	D310	E – 5
Q302	C – 3	D311	E – 5
Q303	C – 4	D312	B – 5
Q304	C – 4	D313	E – 4
Q305	C – 5	D314	E – 4
Q307	C – 5	D315	E – 5
Q308	E – 4	D316	E – 5
Q309	D – 4	D317	D – 3
Q310	E – 4	D320	B – 3
Q311	D – 4	D321	D – 2
Q312	E – 3	D322	C – 2
Q313	E – 5	D323	C – 2
Q314	D – 3	D324	C – 2
Q315	D – 3	D325	C – 2
Q316	C – 3	D326	C – 5
Q317	D – 2	D327	E – 5
Q318	C – 2	D328	F – 3
Q319	C – 3		
Q320	C – 2		
Q321	B – 2		
Q322	E – 4		

P [PICTURE IN PICTURE]

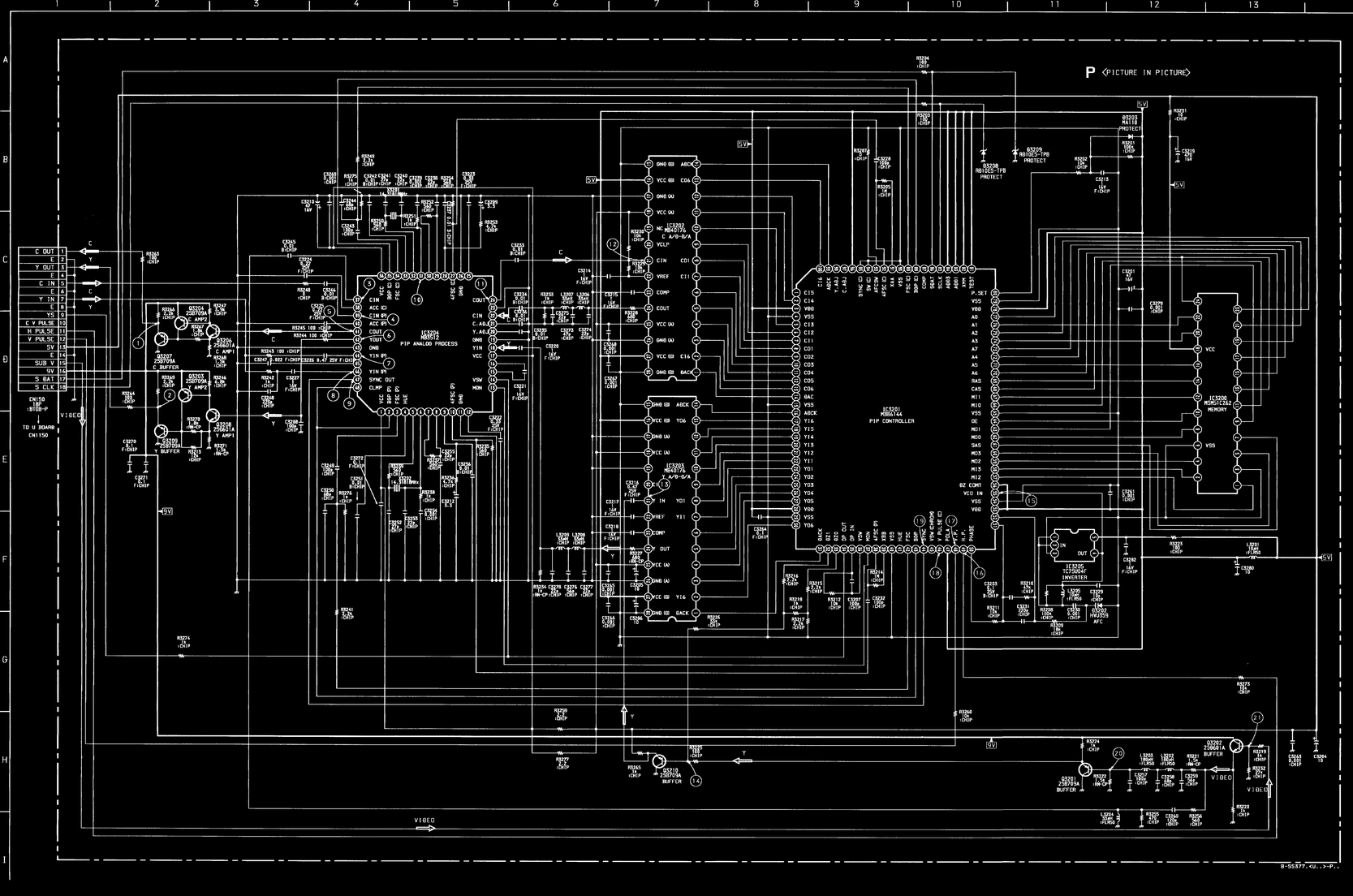
P BOARD

IC	
IC3200	E - 1
IC3201	B - 2
IC3202	C - 3
IC3203	B - 3
IC3204	B - 3
IC3205	B - 1
TRANSISTOR	
Q3201	F - 2
Q3202	F - 4
Q3203	C - 4
Q3204	D - 4
Q3206	D - 4
Q3207	D - 4
Q3208	C - 3
Q3209	C - 4
Q3210	A - 2
DIODE	
D3202	B - 1
D3203	D - 2
D3208	D - 2
D3209	D - 3



Note :

• : Pattern of the rear side.



P BOARD IC VOLTAGE LIST

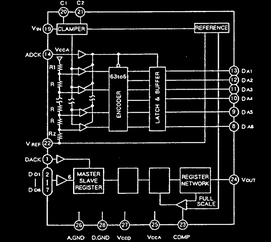
ALL VOLTAGES ARE IN V

IC3200	1	*	6	GND	11	2.3	16	2.1	21	2.5
	2	*	7	1.5	12	2.4	17	2.5	22	2.5
	3	GND	8	*	13	4.0	18	5.0	23	2.3
	4	*	9	2.0	14	3.2	19	2.5	24	4.0
	5	*	10	1.9	15	2.7	20	2.5		
IC3201	1	3.1	21	2.0	41	4.9	61	*	81	5.0
	2	3.1	22	2.3	42	2.5	62	*	82	5.0
	3	5.0	23	5.0	43	4.7	63	*	83	5.0
	4	GND	24	5.0	44	3.7	64	*	84	5.0
	5	0	25	0	45	3.6	65	GND	85	4.6
	6	2.9	26	0	46	0	66	2.3	86	4.6
	7	2.8	27	5.0	47	5.0	67	2.4	87	NC
	8	0	28	5.0	48	0.2	68	4.0	88	4.7
	9	0	29	GND	49	0.8	69	3.2	89	2.5
	10	0.2	30	0	50	2.5	70	2.7	90	GND
	11	0.2	31	2.9	51	2.5	71	2.1	91	2.5
	12	0.2	32	2.9	52	3.4	72	2.5	92	2.4
	13	4.9	33	2.2	53	5.0	73	2.5	93	GND
	14	2.6	34	4.9	54	GND	74	2.5	94	GND
	15	GND	35	5.0	55	2.5	75	2.5	95	GND
	16	2.7	36	5.0	56	5.0	76	2.5	96	5.0
	17	0	37	0.2	57	*	77	2.3	97	NC
	18	2.9	38	2.4	58	*	78	5.0	98	NC
	19	0.7	39	2.5	59	*	79	GND	99	2.7
	20	1.9	40	GND	60	*	80	4.9	100	0.8
IC3202	1	2.6	7	0	13	0.8	19	NC	25	5.0
	2	4.9	8	2.8	14	2.7	20	NC	26	GND
	3	0.2	9	2.9	15	GND	21	4.5	27	5.0
	4	0.2	10	0	16	5.0	22	4.1	28	GND
	5	0.2	11	3.1	17	GND	23	2.8		
	6	0	12	3.1	18	5.0	24	4.0		
IC3203	1	2.9	7	5.0	13	0	19	GND	25	5.0
	2	0	8	2.3	14	2.7	20	NC	26	GND
	3	5.0	9	2.9	15	GND	21	4.5	27	5.0
	4	0	10	1.9	16	5.0	22	4.1	28	GND
	5	0	11	0.7	17	GND	23	2.8		
	6	5.0	12	2.9	18	5.0	24	3.8		
IC3204	1	5.0	6	3.2	11	GND	16	2.4	21	3.6
	2	4.7	7	2.6	12	0.2	17	5.0	22	2.9
	3	3.7	8	2.5	13	0.2	18	2.9	23	GND
	4	3.3	9	2.8	14	4.9	19	GND	24	1.8
	5	3.4	10	2.5	15	2.7	20	3.6	25	0
	26	GND	31	0	36	5.0	41	2.0	46	2.9
	27	2.5	32	3.4	37	1.5	42	1.5	47	3.7
	28	0	33	3.3	38	2.8	43	GND	48	4.7
	29	0	34	3.7	39	1.6	44	2.8		
	30	2.5	35	4.7	40	2.9	45	2.7		
IC3205	1	2.5	2	2.5	3	GND	4	2.5	5	4.9

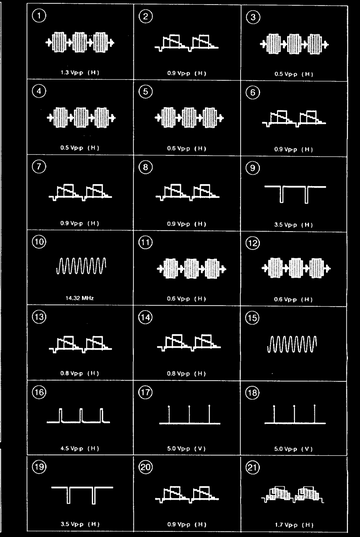
P BOARD TRANSISTOR VOLTAGE LIST

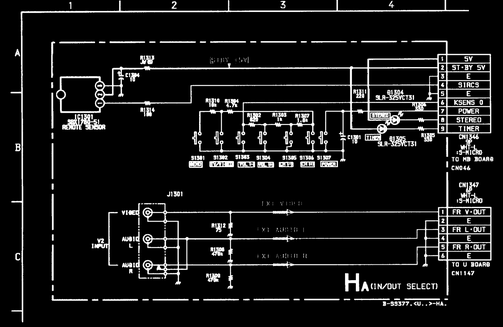
	E	C	B
Q3201	2.6	GND	1.9
Q3202	3.8	9.0	4.4
Q3203	9.0	1.6	8.5
Q3204	9.0	2.6	8.5
Q3206	1.3	8.5	1.9
Q3207	3.3	GND	2.6
Q3208	0.9	8.5	1.5
Q3209	2.3	GND	1.6
Q3210	3.2	GND	2.6

P BOARD IC3202, IC3203 MB40176



• P BOARD WAVEFORMS





HA BOARD IC VOLTAGE LIST

IC1301	1 8.1	2 5.1	3 GND

ALL VOLTAGES ARE IN V

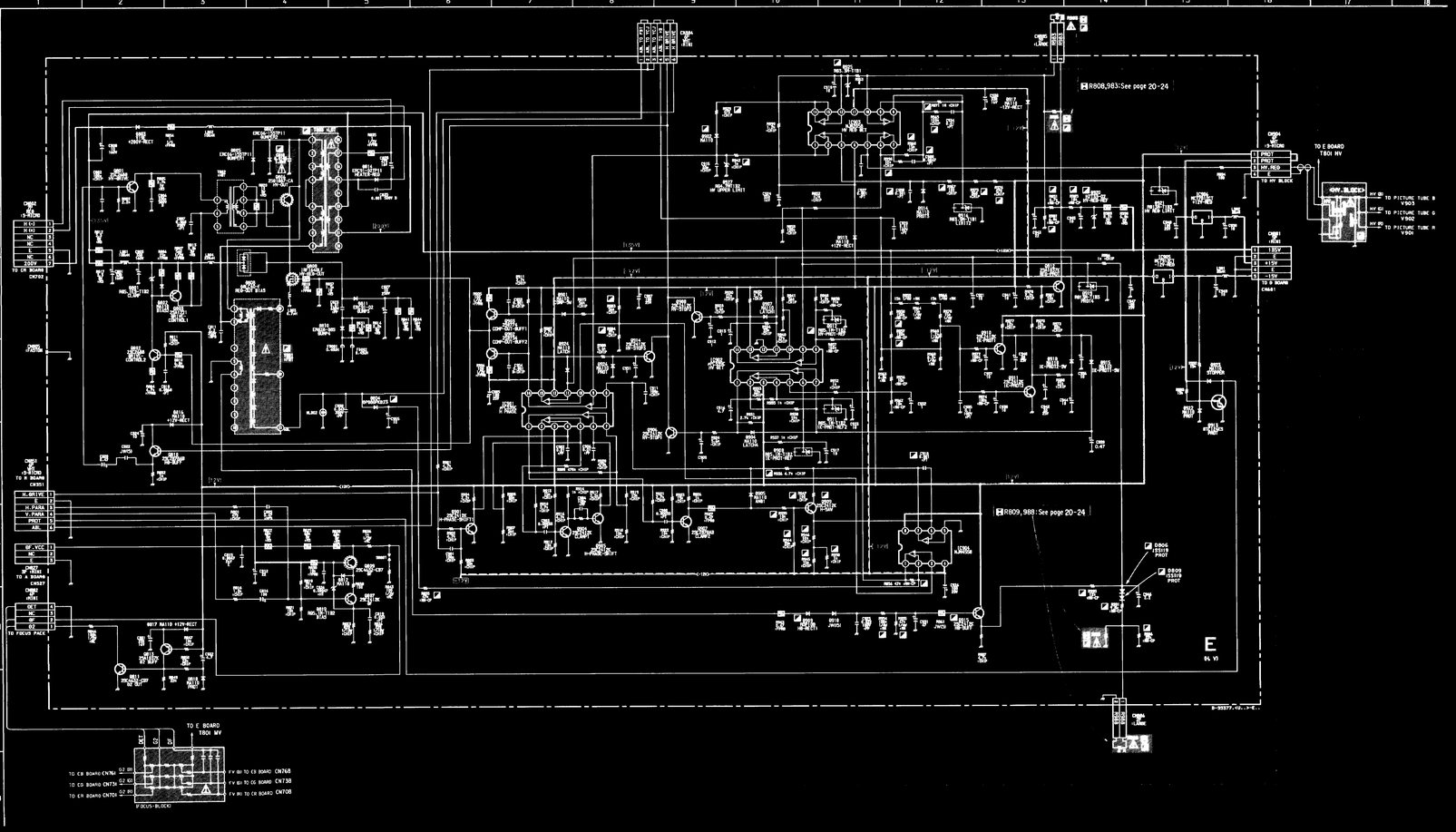
E BOARD IC VOLTAGE LIST ALL VOLTAGES ARE IN V

IC901	1	−6.3	4	3.9	7	4.8	10	4.0	13	−11.6
	2	6.3	5	7.7	8	2.5	11	0	14	2.0
	3	12.0	6	7.7	9	2.8	12	−12.0		
IC902	1	0.2	4	5.2	7	0	10	4.0	13	0.2
	2	0	5	4.8	8	5.2	11	0	14	0
	3	12.0	6	5.2	9	5.0	12	GND		
IC903	1	3.9	4	11.6	7	7.6	10	7.6	13	11.2
	2	3.9	5	7.6	8	3.9	11	−11.1	14	11.2
	3	3.9	6	7.6	9	7.6	12	0.4		
IC904	1	8.9	3	8.9	5	GND	7	2.2		
	2	8.9	4	−12.0	6	0.2	8	12.0		
IC905	1	−12.0	2	−15.0	3	GND				
IC906	1	12.0	2	15.0	3	GND				

E BOARD TRANSISTOR VOLTAGE LIST

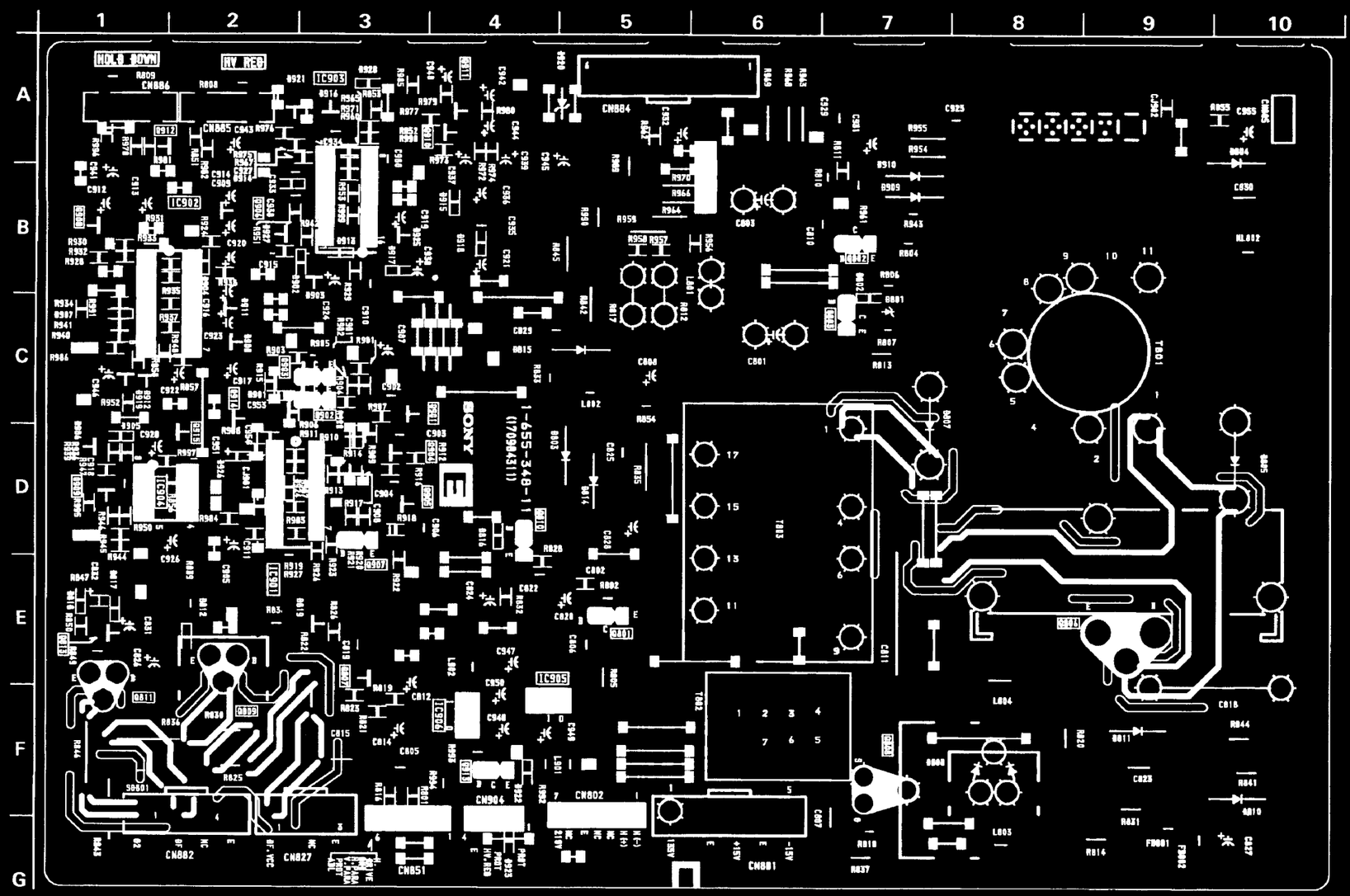
	E	C	B
Q801	GND	106.7	−0.3
Q802	2.1	131.7	2.5
Q803	130.3	106.8	131.7
Q806	51.9	135.6	51.9
Q807	2.7	11.6	3.3
Q809	11.9	354.0	12.3
Q810	2.1	11.7	2.6
Q811	GND	642.0	0
Q813	12.3	0	12.3
Q901	GND	3.9	0.3
Q902	1.9	−12.0	2.0
Q903	1.9	12.0	2.0
Q904	GND	0.6	0.6
Q905	GND	7.7	0.2
Q906	GND	2.6	0.2
Q907	GND	0.6	0.5
Q908	GND	2.6	0.2
Q909	0.2	2.2	−2.1
Q910	GND	0	0.7
Q911	GND	0	0.7
Q912	10.7	GND	10.1
Q913	GND	3.4	−0.3
Q914	GND	2.6	−0.6
Q915	0	12.0	0

	S	D	G
Q888	0	51.9	1.9



E [H. V] HA [IN/OUT SELECT]

– E BOARD –



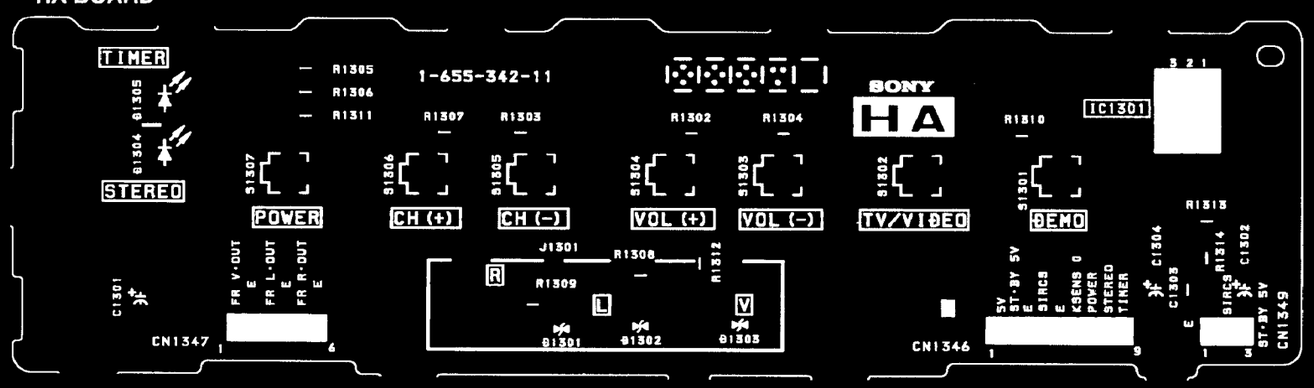
E BOARD

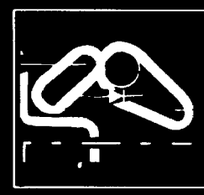
IC	
IC901	D – 3
IC902	B – 2
IC903	B – 3
IC904	D – 2
IC905	F – 4
IC906	F – 4

TRANSISTOR	
Q801	E – 5
Q802	B – 7
Q803	C – 7
Q806	E – 9
Q807	F – 3
Q808	F – 7
Q809	F – 2
Q810	D – 4
Q811	F – 1
Q813	E – 1
Q901	D – 3
Q902	C – 3
Q903	C – 3
Q904	D – 3
Q905	D – 3
Q906	B – 2
Q907	D – 3
Q908	B – 1
Q909	D – 1
Q910	A – 4
Q911	A – 4
Q912	A – 2
Q913	F – 4
Q914	D – 2
Q915	D – 2

DIODE	
D801	C – 7
D802	C – 7
D803	D – 5
D804	B – 10
D805	D – 10
D806	
D807	D – 7
D808	F – 8
D809	
D810	F – 10
D811	F – 9
D812	E – 2
D814	D – 5
D816	D – 4
D817	E – 1
D818	E – 1
D819	E – 3
D901	C – 2
D902	B – 3
D904	B – 2
D905	D – 1
D907	C – 1
D908	C – 2
D909	B – 7
D911	C – 2
D912	C – 1
D913	B – 3
D914	B – 3
D915	B – 4
D916	A – 3
D917	B – 3
D918	B – 4
D919	C – 1
D920	A – 5
D921	A – 3
D922	F – 4
D923	F – 4
D924	D – 3
D925	B – 3
D926	D – 2
D927	B – 2

– HA BOARD –





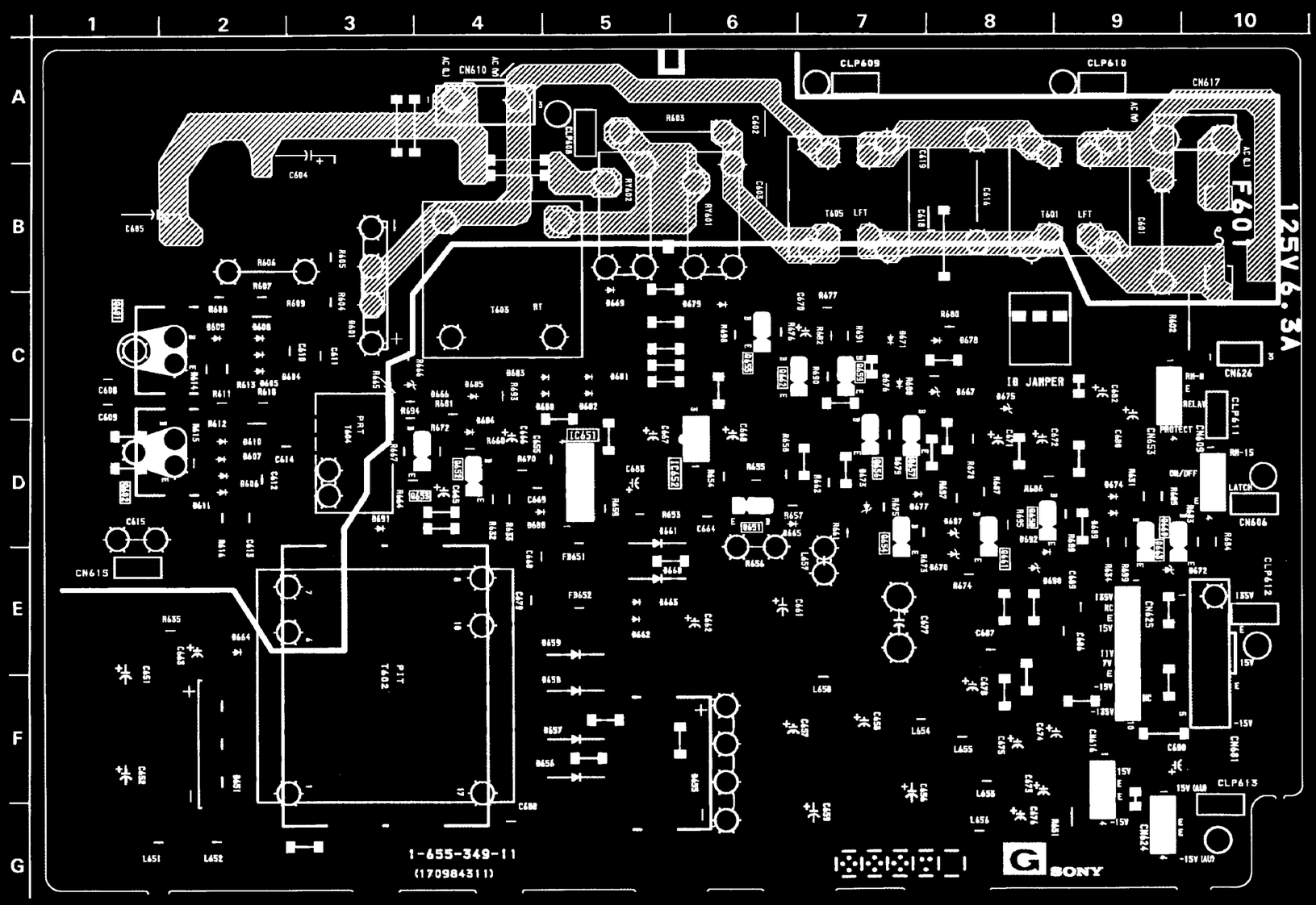
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

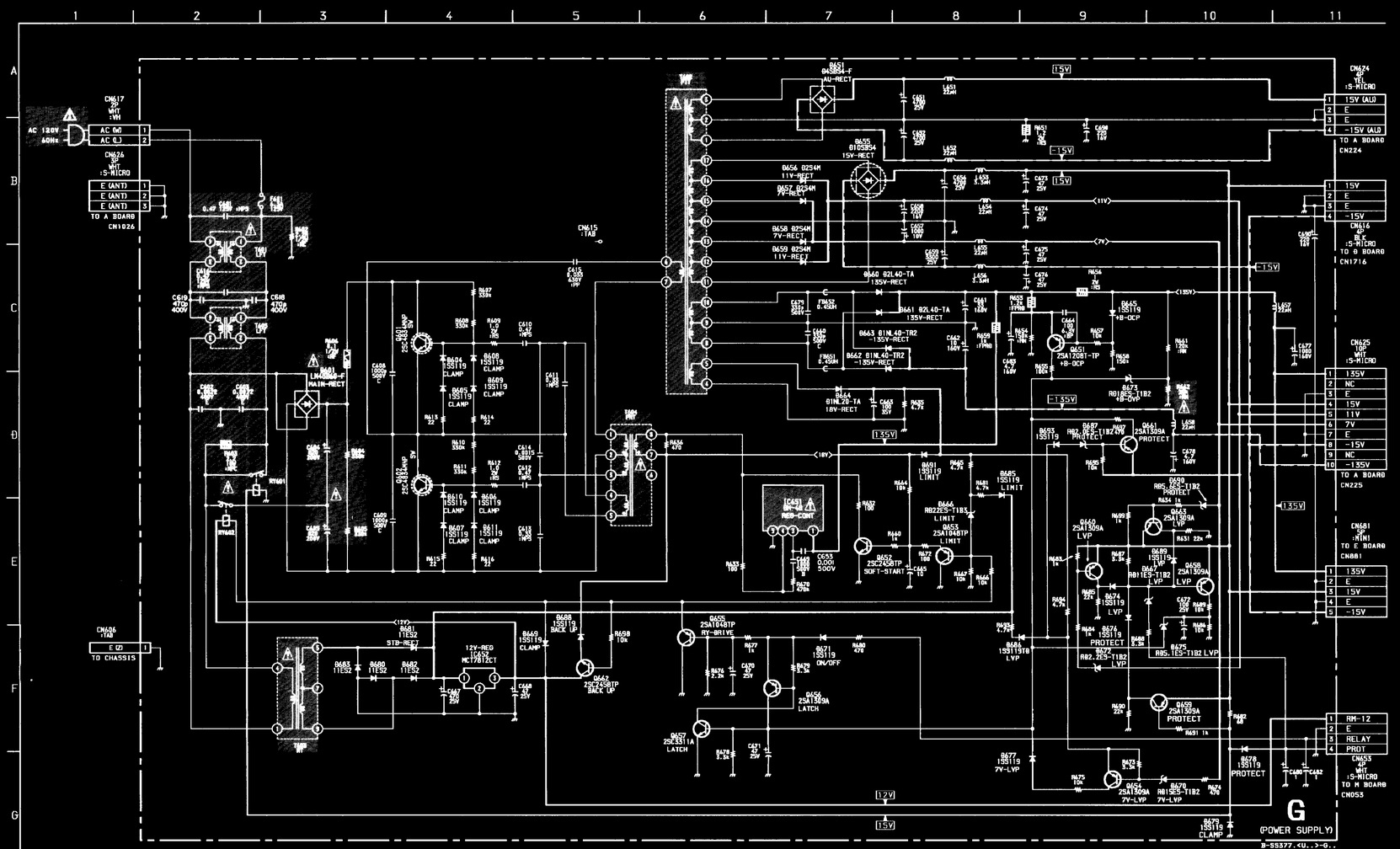
G [POWER SUPPLY]

– G BOARD –

G BOARD

IC	
IC651	D – 5
IC652	D – 6
TRANSISTOR	
Q601	C – 1
Q602	D – 1
Q651	D – 6
Q652	D – 4
Q653	D – 4
Q654	E – 7
Q655	C – 6
Q656	D – 7
Q657	D – 7
Q658	D – 8
Q659	C – 7
Q660	E – 9
Q661	E – 8
Q662	C – 7
Q663	E – 9
DIODE	
D601	C – 3
D604	C – 2
D605	C – 2
D606	D – 2
D607	D – 2
D608	C – 2
D609	C – 2
D610	D – 2
D611	D – 2
D651	F – 2
D655	F – 6
D656	F – 5
D657	F – 5
D658	F – 5
D659	E – 5
D660	E – 5
D661	E – 5
D662	E – 5
D663	E – 5
D664	E – 2
D665	D – 6
D666	C – 4
D667	C – 8
D669	C – 5
D670	E – 8
D671	C – 7
D672	E – 9
D673	D – 7
D674	D – 9
D675	D – 8
D676	C – 7
D677	D – 7
D678	C – 8
D679	C – 6
D680	C – 5
D681	C – 5
D682	C – 5
D683	C – 5
D685	C – 4
D686	D – 4
D687	E – 8
D688	D – 5
D689	D – 9
D690	E – 8
D691	D – 3
D693	





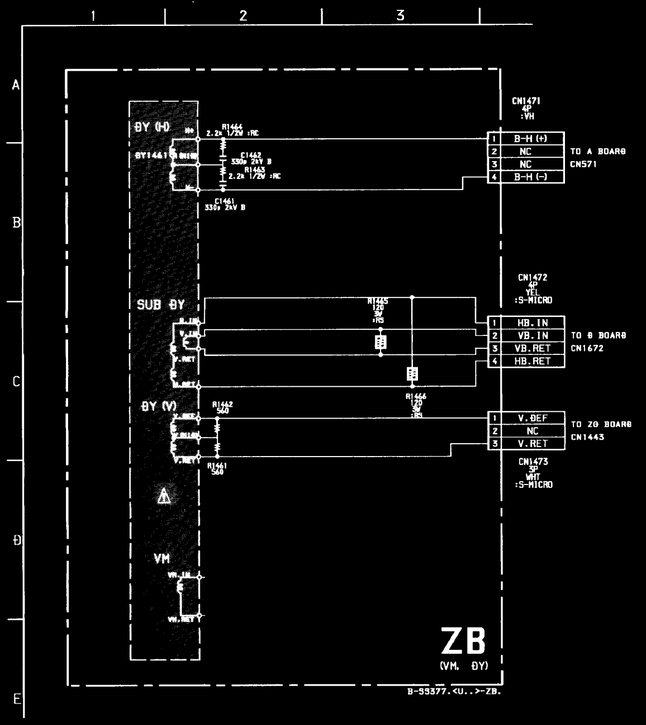
G BOARD IC VOLTAGE LIST

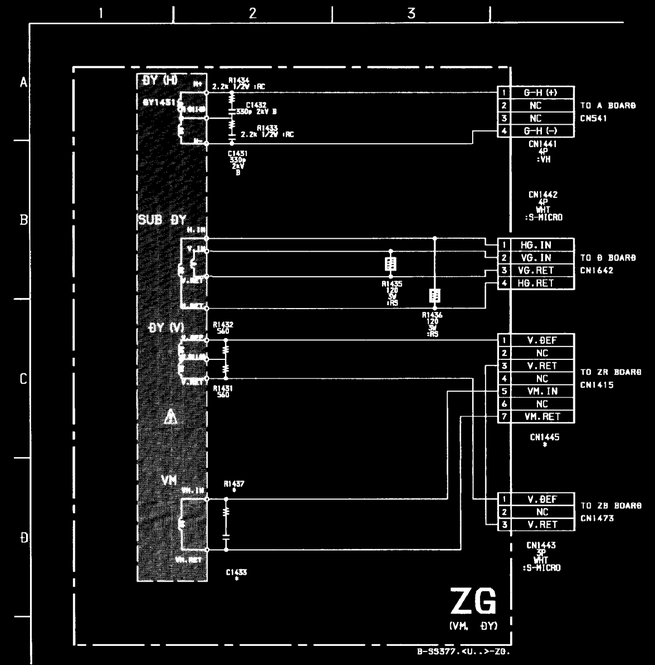
ALL VOLTAGES ARE IN V

IC651	1 135.4	3 2.6	4 8.9	5 GND	
IC652	1 22.0	2 GND	3 12.0		

G BOARD TRANSISTOR VOLTAGE LIST

	E	C	B
Q601	−1.8	0	−3.9
Q602	−118.5	−1.8	−120.3
Q651	135.5	0.2	136.4
Q652	13.0	GND	15.1
Q653	GND	15.1	0
Q654	15.7	−2.0	15.7
Q655	GND	0.2	0.8
Q656	2.7	0.2	2.7
Q657	GND	2.7	0.2
Q658	15.0	8.2	14.8
Q659	15.0	15.3	14.6
Q660	15.0	15.3	14.6
Q661	11.0	0.2	11.5
Q662	12.0	12.1	11.4
Q663	15.0	15.3	14.6





ZG BOARD * MARK

Ref.No.	KP-41T15(U/C)	KP-46S15(U/C)	KP-53S15(U/C)
C1433	100p	–	–
CN1445	7P	3P	3P
R1437	1k	–	–

– : NOT MOUNT

ZR BOARD * MARK

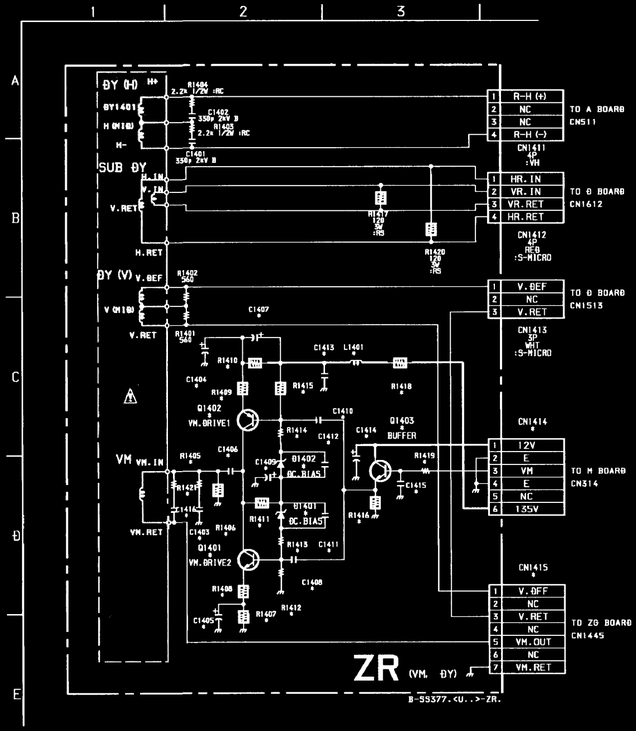
Ref.No.	KP-41T15(U/C)	KP-46S15(U/C)	KP-53S15(U/C)
C1403	220p	–	–
C1404	33 160V	–	–
C1405	100 25V	–	–
C1406	0.1	–	–
C1407	100 25V	–	–
C1408	0.0047	–	–
C1409	2.2 160V	–	–
C1410	0.0047	–	–
C1411	0.001	–	–
C1412	0.001	–	–
C1413	0.0047	–	–
C1414	330 16V	–	–
C1415	10p	–	–
C1416	100p	–	–
CN1414	6P	–	–
CN1415	7P	3P	3P
D1401	RD39ES-T1B	–	–
D1402	RD39ES-T1B	–	–
L1401	JW 5MM	–	–
Q1401	2SC4793	–	–
Q1402	2SA1837	–	–
Q1403	2SD774-T-4	–	–
R1405	1k	–	–
R1406	560 3W	–	–
R1407	39	–	–
R1408	1.8	–	–
R1409	1.8	–	–
R1410	39 1/2W	–	–
R1411	1k	–	–
R1412	560	–	–
R1413	18k	–	–
R1414	18k	–	–
R1415	560	–	–
R1416	120 2W	–	–
R1418	0.47	–	–
R1419	220	–	–
R1421	1k	–	–

– : NOT MOUNT

ZR BOARD TRANSISTOR VOLTAGE LIST

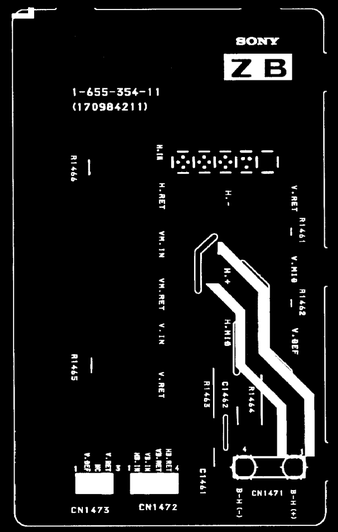
	E	C	B
Q1401	0	−0.5	0
Q1402	−1.0	−0.5	−0.9
Q1403	4.8	12.0	5.4

ALL VOLTAGES ARE IN V

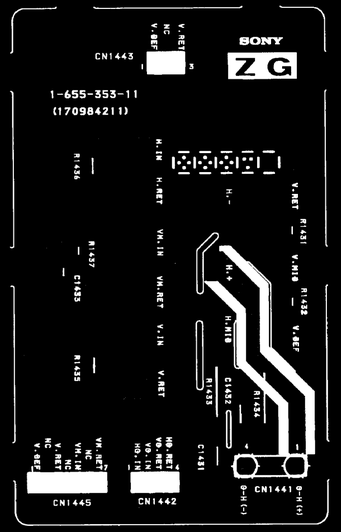


ZB [VM, DY] ZG [VM, DY] ZR [VM, DY]

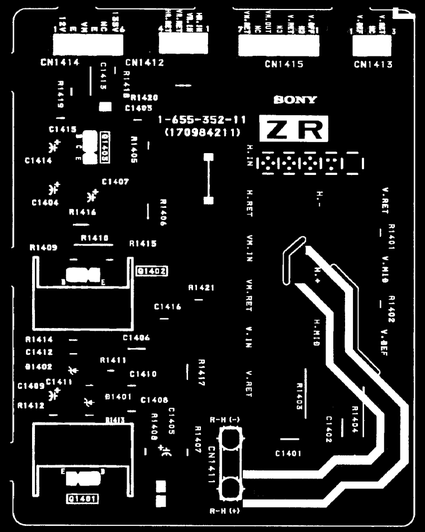
– ZB BOARD –



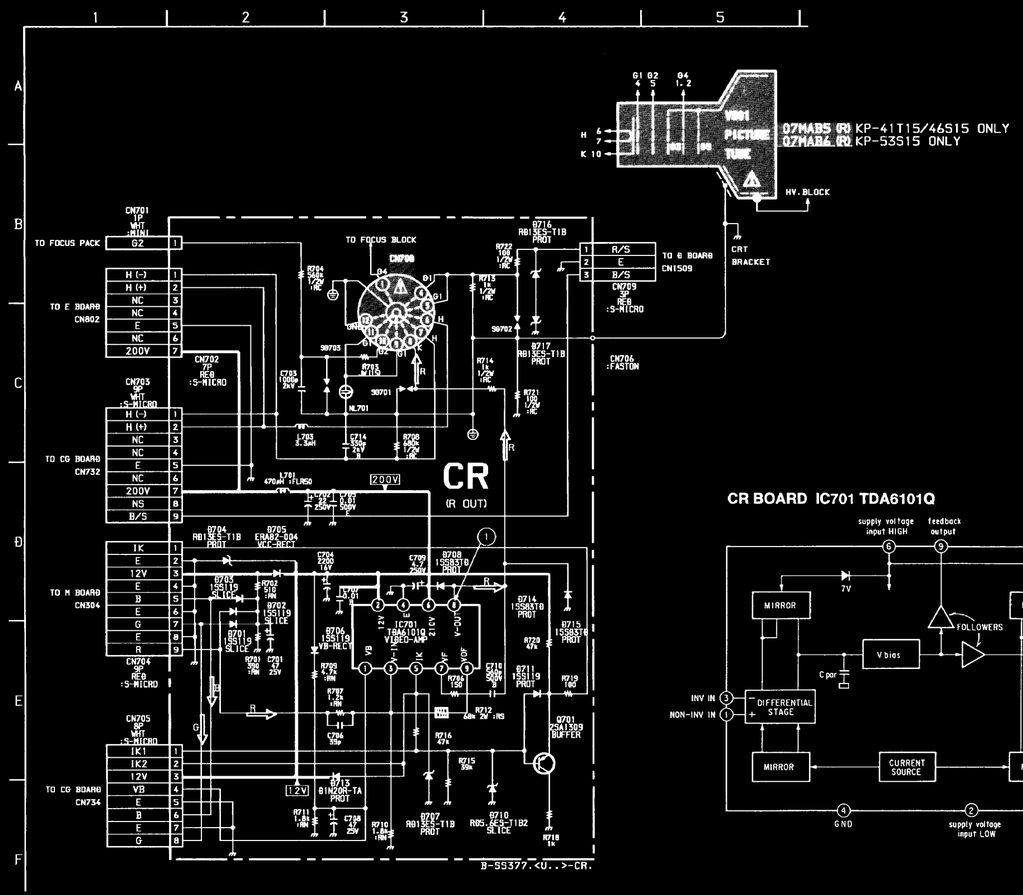
– ZG BOARD –



– ZR BOARD –



Schematic diagrams
CG CR boards ➡



CR BOARD IC VOLTAGE LIST

ALL VOLTAGES ARE IN V

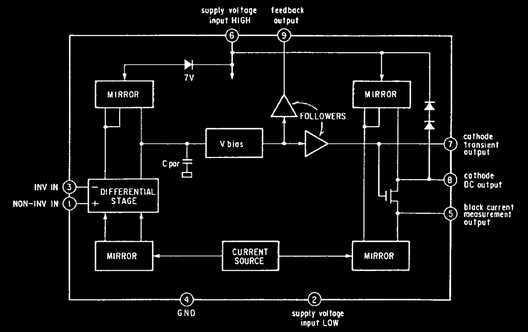
IC701	1	3.2	3	3.0	5	8.2	7	171.5	9	170.1
	2	12.0	4	GND	6	200	8	171.6		

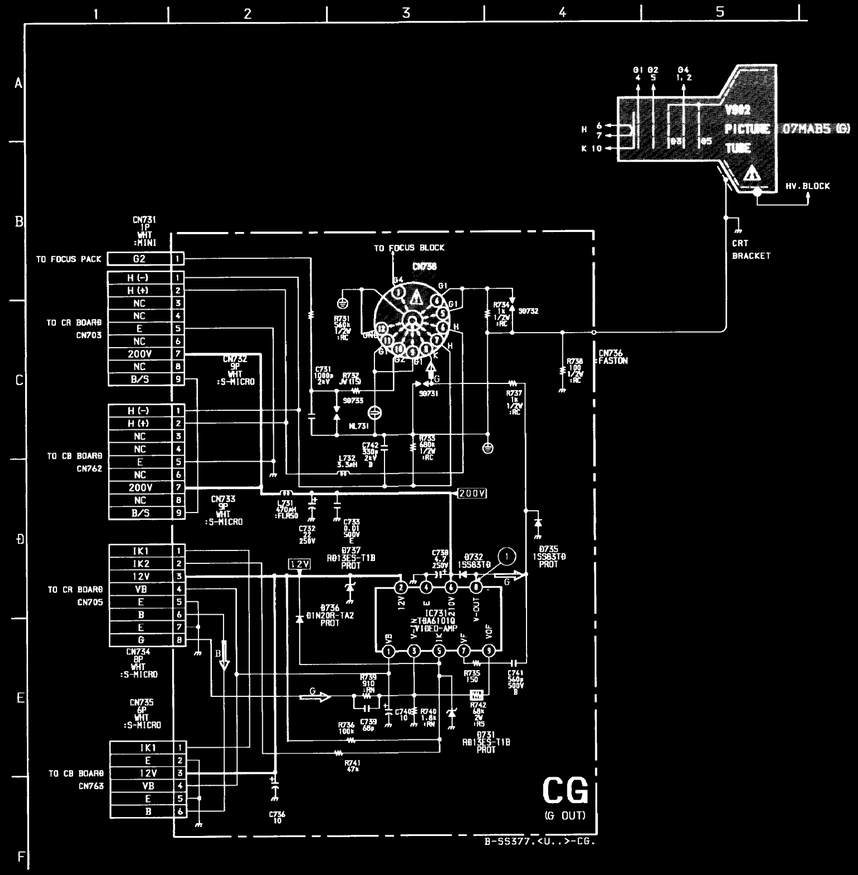
CR BOARD TRANSISTOR VOLTAGE LIST

	E	C	B
Q701	3.3	0.3	3.7

• CR BOARD WAVEFORMS

CR BOARD IC701 TDA6101Q



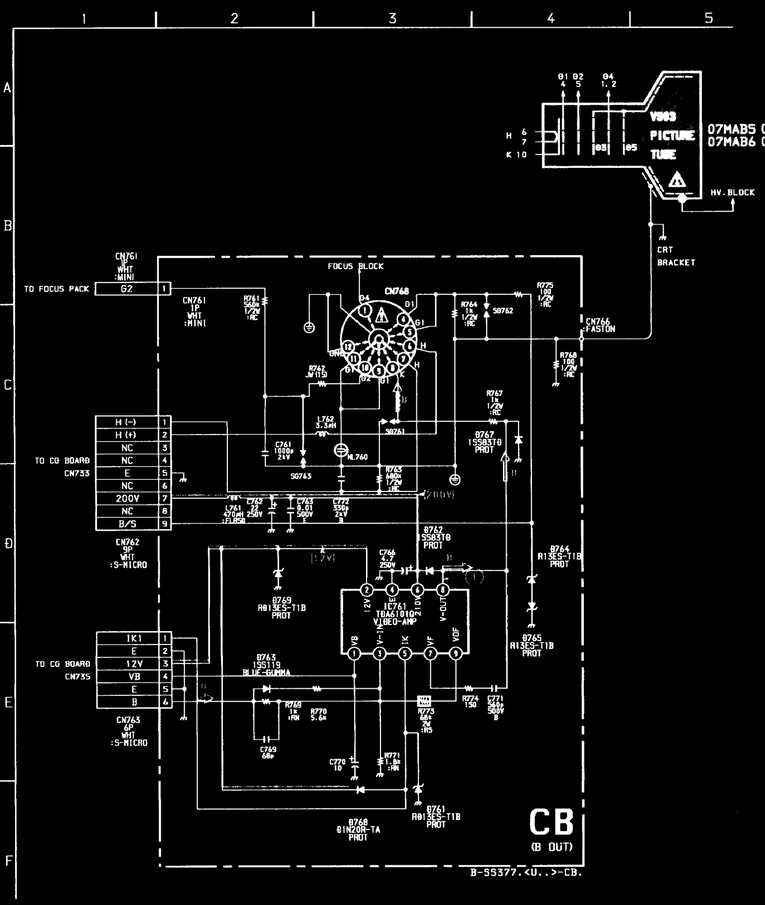


CG BOARD IC VOLTAGE LIST

ALL VOLTAGES ARE IN V

IC731	1	3.1	3	2.9	5	9.6	7	173.8	9	172.4
	2	12.0	4	GND	6	200	8	175.4		

• CG BOARD WAVEFORMS



CB BOARD IC VOLTAGE LIST

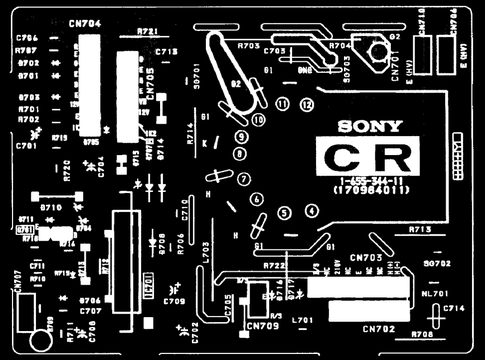
ALL VOLTAGES ARE IN V

IC761	1	3.1	3	3.0	5	4.3	7	147.2	9	145.9
	2	12.0	4	GND	6	200	8	149.7		

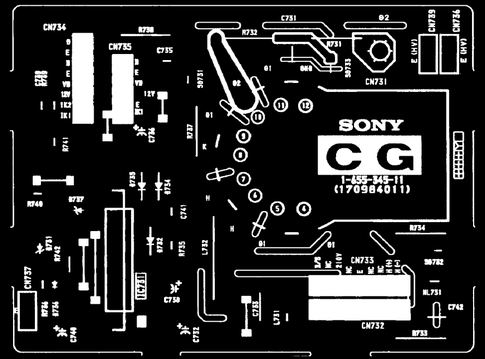
• CB BOARD WAVEFORMS

CR [R OUT] **CG** [G OUT] **CB** [B OUT]

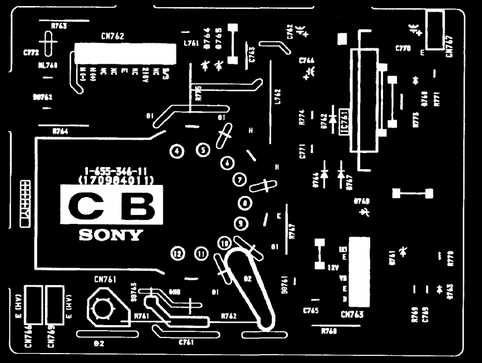
– CR BOARD –



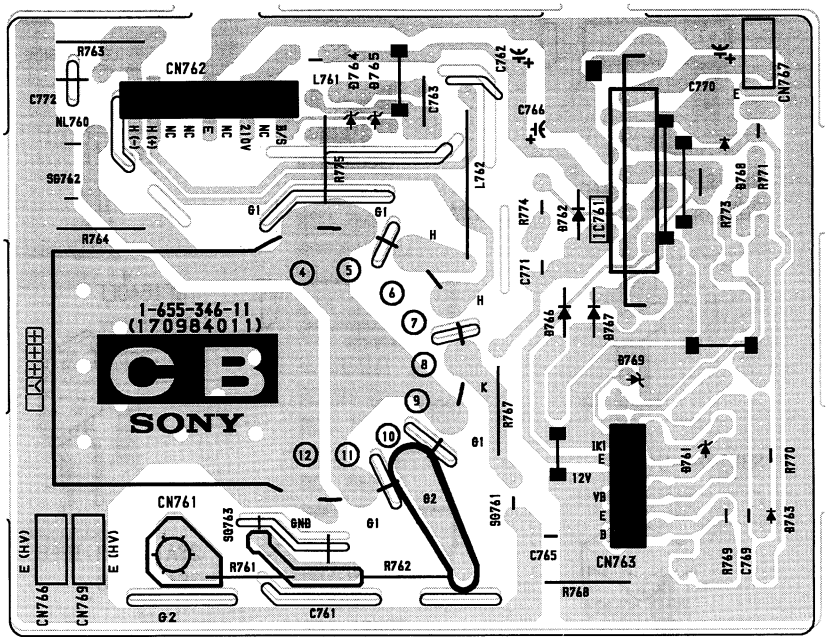
– CG BOARD –



– CB BOARD –



– CB BOARD –

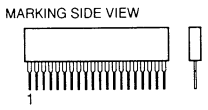


Schematic diagrams

← CB board

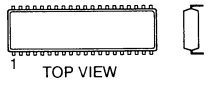
4-4. SEMICONDUCTORS

CAT51C262-ZS
MSM51C262-ZS



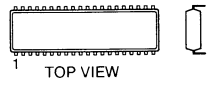
24pin SIP

CXA1477AS
CXA1855S



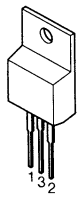
48pin DIP

CXP85112B-SX377
CXP85332A-SX377

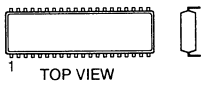


64pin DIP

LM7912CT
NJM7905FA
MC7905CT

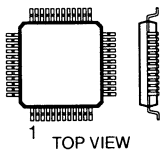


M5218AP
ST24C01CB1
ST24C04CB1
UPC358C



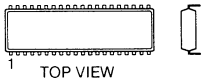
8pin DIP

MB3512PFQ



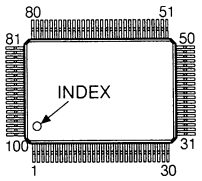
48pin QFP

MB40176PF-G-BND-EF

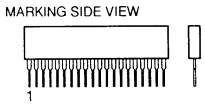


16pin DIP

MB86144BPF-G-BND

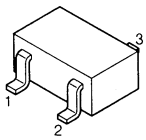


MN1280-S

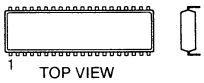


3pin SIP

MN1382S

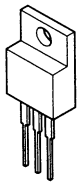


NJM2058D

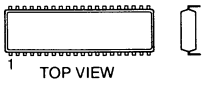


14pin DIP

NJM7805FA
NJM7812FA
NJM78M09FA
TA7805S
TA7812S

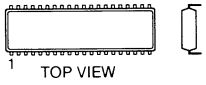


PA0053B
Z8622812PSC



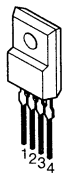
18pin DIP

PM0002B

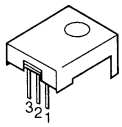


42pin DIP

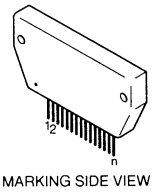
PQ05RF1
PQ09RA1



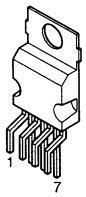
SBX1780-51



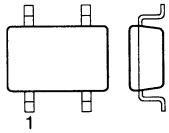
STK392-010



STV9379

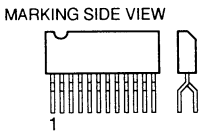


TC7SU04F



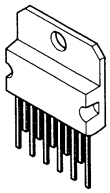
5pin CHIP

TDA6101Q

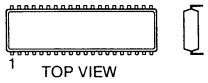


9pin ZIP

TDA7265

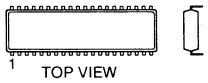


TDA8424



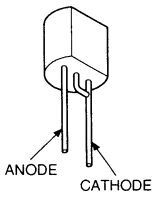
20pin DIP

UPC339C

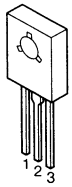


14pin DIP

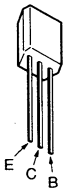
UPC574J



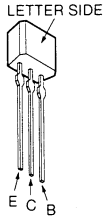
UPC78N05H



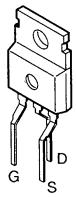
DTC124ES
2SC2458-YGR



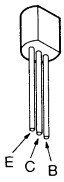
DTC323TS
2SA1175-HFE
2SC2785-HFE



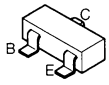
IRFI640LF



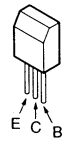
2SA1013-R-TPE6
2SA1208-S



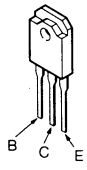
2SA1162-G
2SC1623-L5L6
2SD601A-Q



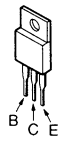
2SA1221-L
2SB733-34
2SD774-34



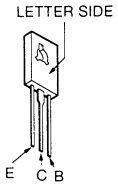
2SA1492M-OPY



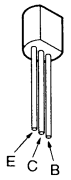
2SA1837
2SC4793
2SD2348(LBSONY-2)



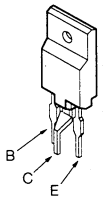
2SB649A-C
2SC2688-LK



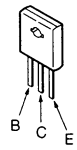
2SC2878-AB



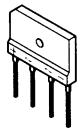
2SC4632LS-CB7
2SD1887-CA



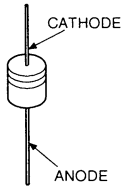
2SC4834M



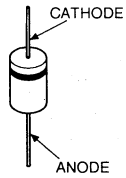
D10SBS4-F
D4SBS4-F
LN4SB60-F



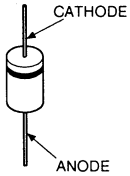
D1N20R
ERA85-009
ERC91-02TP11
RD10ESB2
RD11ESB2
RD13ESB2
RD15ESB2
RD18ESB2
RD2.0ESB2
RD2.2ESB2
RD22ESB3
RD24ESB
RD3.3ESB2
RD3.9ESB2
RD33ESB1
RD39ESB2
RD5.1ESB1
RD5.1ESB2
RD5.6ESB1
RD5.6ESB2
RD8.2ESB2
RD9.1ESL
11ES2
1SS119-25



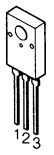
D1NL20
D1NL40-TR2
D2L40-TA
EL1Z
ERD28-08S
GP08D
RGP02-20EL-6394
1SS83



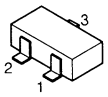
D2S4MF



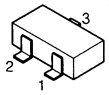
D8LC40-F



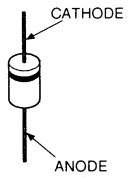
DAN202K



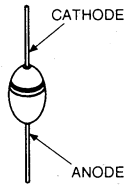
DAP202K



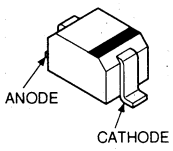
ERC06-15S
ERC91-02
RU-1C



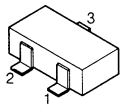
ERC38-06
V09G



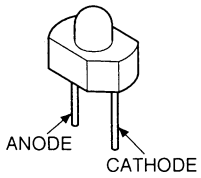
HVU359TRF
MA110
1T363



RD13M-B3
RD3.3M-B1
RD3.9M-B1
RD4.7M-B2
RD5.1M-B2
RD5.6M-B2



SLR-325VCT31



SECTION 5
EXPLODED VIEWS

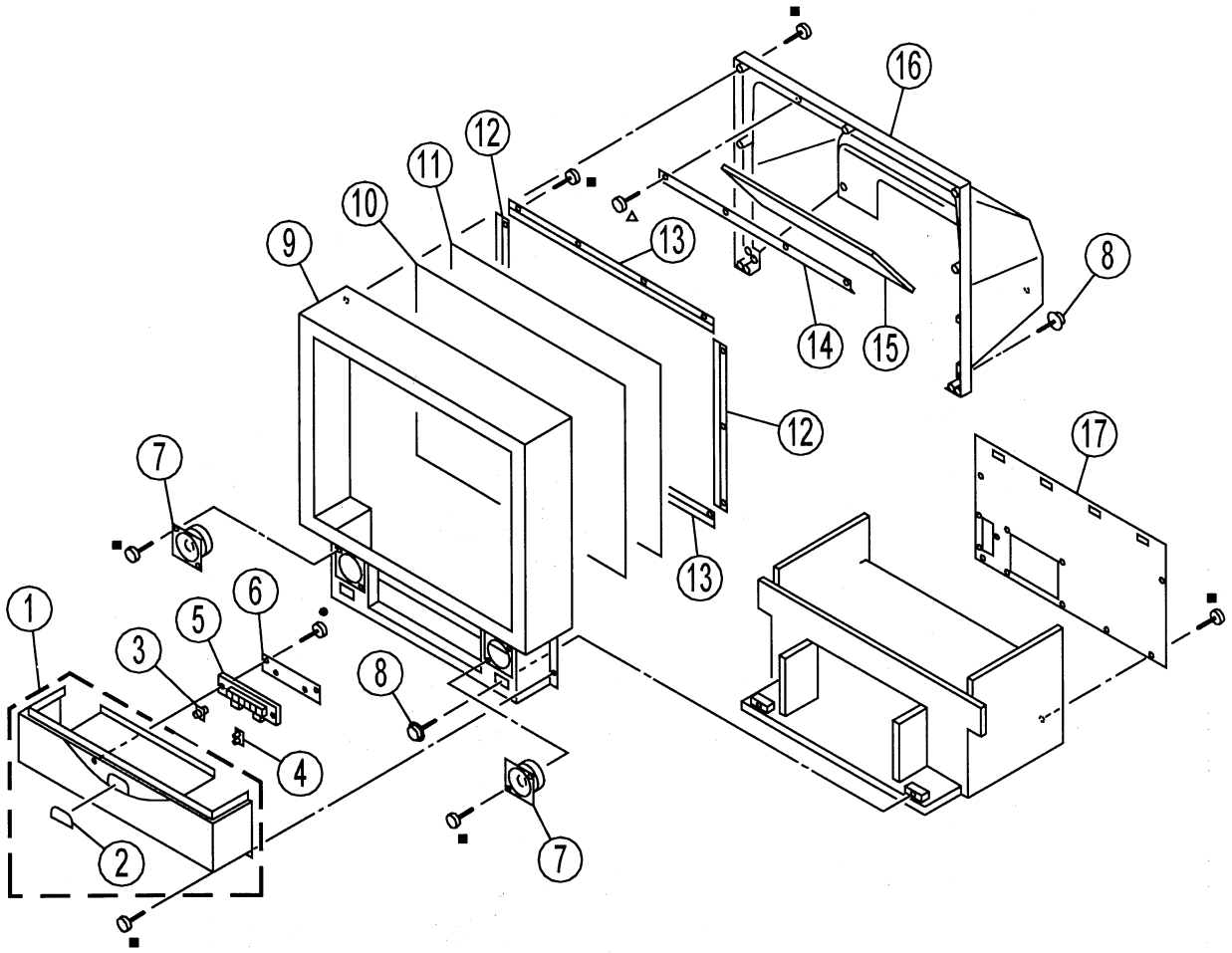
NOTE :
- Items with on part number and on description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

5-1. COVER (KP-41T15)

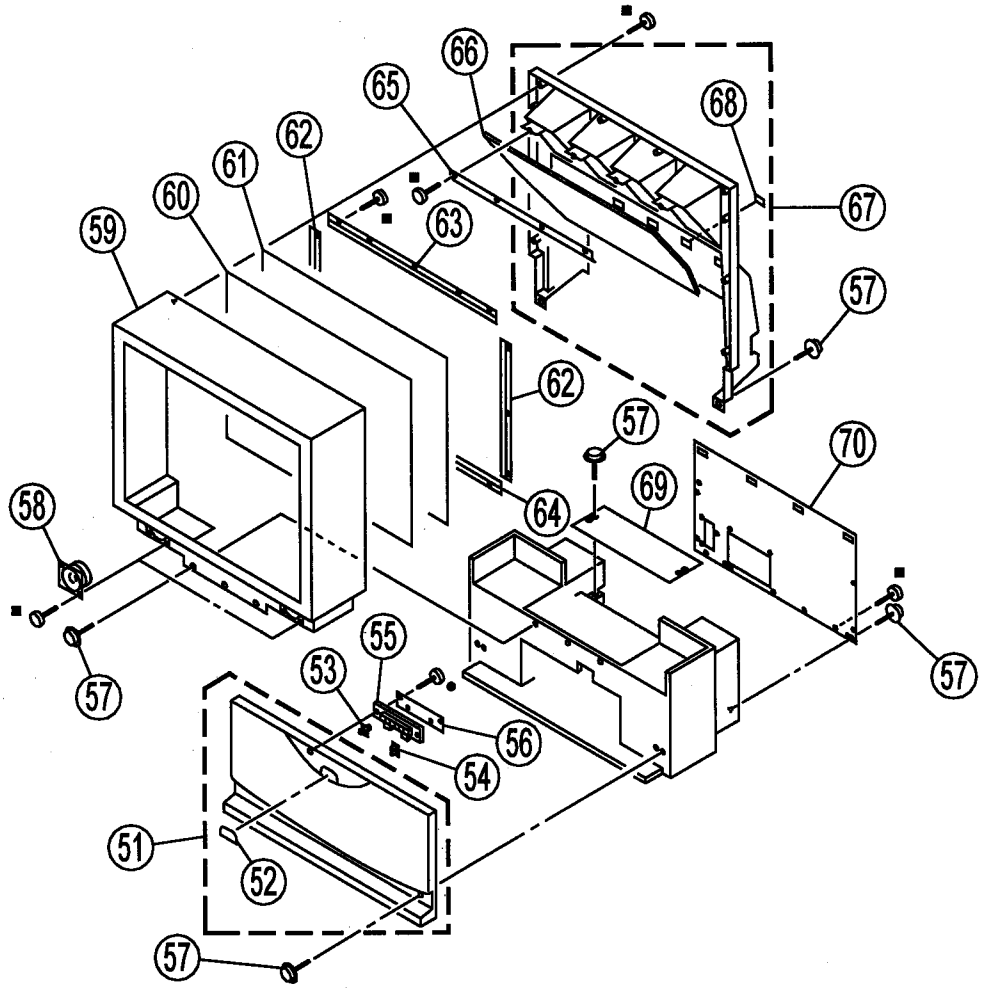
●: 7-685-648-79 + BVTP 3×12
■: 7-685-663-79 + BVTP 4×16
△: 7-685-660-79 + BVTP 4×10



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4032-545-1	PANEL ASSY, CONTROL	
2	4-048-000-01	DOOR, CONTROL	
3	4-047-999-01	FILTER, REMOTE	
4	4-047-998-01	GUIDE, LIGHT, LED	
5	4-048-001-01	BUTTON, MULTI	
6	*A-1372-099-A	HA BOARD, COMPLETE	
7	1-504-785-11	SPEAKER (10CM)	
8	4-041-164-11	SCREW (4X20), TAPPING	
9	X-4032-546-1	BEZNET ASSY	
10	4-034-053-01	PLATE (L), DIFFUSION	
11	4-047-943-11	PLATE (F), DIFFUSION	2
12	4-036-092-01	HOLDER (S), SCREEN	
13	4-036-091-31	HOLDER (L), SCREEN	
14	*4-037-351-01	HOLDER, MIRROR	
15	4-047-861-01	MIRROR (41), REFLECTION	
16	*X-4032-607-1	COVER ASSY, MIRROR	
17	*4-047-837-01	PLATE (41), REAR	

5-2. COVER (KP-46S15/53S15)

● : 7-685-648-79 + BVTP 3×12
■ : 7-685-663-79 + BVTP 4×16



REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4032-614-1	GRILLE ASSY, SPEAKER	152
52	4-048-000-01	DOOR, CONTROL	
53	4-047-999-01	FILTER, REMOTE	
54	4-047-998-01	GUIDE, LIGHT, LED	
55	4-048-001-01	BUTTON, MULTI	
56	*A-1372-099-A	HA BOARD, COMPLETE	
57	4-041-164-11	SCREW (4X20), TAPPING	
58	1-504-785-11	SPEAKER (10CM)	
59	X-4032-617-1	BEZNET ASSY (KP-46S15)	
	X-4032-618-1	BEZNET ASSY (KP-53S15)	
60	4-036-466-11	PLATE (L), DIFFUSION (KP-53S15)	
	4-037-360-11	PLATE (L), DIFFUSION (KP-46S15)	
61	4-036-469-11	PLATE (F), DIFFUSION (KP-53S15)	
	4-048-205-11	PLATE (F), DUFFUSION (KP-46S15)	
62	*4-048-152-01	HOLDER (S), SCREEN (KP-46S15)	
	*4-048-152-11	HOLDER (S), SCREEN (KP-53S15)	
63	*4-048-159-01	HOLDER (L), SCREEN (KP-46S15)	
	*4-048-159-11	HOLDER (L), SCREEN (KP-53S15)	
64	*4-048-159-21	HOLDER (L), SCREEN (KP-46S15)	
	*4-048-159-31	HOLDER (L), SCREEN (KP-53S15)	
65	4-036-092-01	HOLDER (S), SCREEN	
66	4-048-181-01	MIRROR (53) (KP-53S15)	
	4-048-182-01	MIRROR (46'') (KP-46S15)	
67	*X-4032-619-1	COVER ASSY, MIRROR (KP-46S15)	168
	*X-4032-620-1	COVER ASSY, MIRROR (KP-53S15)	168
68	4-048-150-01	CAP, HOLE	
69	*4-048-160-01	PLATE, SHIELD (KP-46S15)	
	*4-048-161-01	PLATE, SHIELD (KP-53S15)	
70	*4-048-168-01	PLATE, REAR (KP-53S15)	
	*4-048-169-01	PLATE, REAR (KP-46S15)	

E **D**

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R995	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R996	1-208-814-11	METAL CHIP	22K	0.50%	1/10W	
R997	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R998	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R999	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
		<SPARK GAP>				
SG801	1-519-422-11	GAP, SPARK				
		<TRANSFORMER>				
T801 ⚠	8-598-939-00	TRANSFORMER ASSY, FLYBACK (MX-2631/A4S)				
T802	1-437-209-11	TRANSFORMER, HORIZONTAL DRIVE				
T803 ⚠	1-427-980-11	TRANSFORMER, FERRITE (LOT)				
**********						
*A-1346-296-A		D BOARD, COMPLETE				
		**********				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C1502	1-126-768-11	ELECT	2200MF	20%	16V	
C1503	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C1504	1-126-768-11	ELECT	2200MF	20%	16V	
C1505	1-136-177-00	FILM	1MF	5%	50V	
C1506	1-102-228-00	CERAMIC	470PF	10%	500V	
C1507	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C1508	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1509	1-124-122-11	ELECT	100MF	20%	50V	
C1510	1-137-398-11	FILM	0.068MF	10%	100V	
C1511	1-137-423-11	FILM	0.15MF	10%	100V	
C1512	1-137-423-11	FILM	0.15MF	10%	100V	
C1513	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C1514	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C1515	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C1516	1-136-177-00	FILM	1MF	5%	50V	
C1517	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C1551	1-126-964-11	ELECT	10MF	20%	50V	
C1603	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1604	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1605	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1606	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1607	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1608	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1611	1-124-122-11	ELECT	100MF	20%	50V	
C1612	1-104-665-11	ELECT	100MF	20%	25V	
C1613	1-124-122-11	ELECT	100MF	20%	50V	
C1615	1-104-665-11	ELECT	100MF	20%	25V	
C1617	1-126-967-11	ELECT	47MF	20%	50V	
C1619	1-104-664-11	ELECT	47MF	20%	25V	
C1620	1-126-967-11	ELECT	47MF	20%	50V	
C1622	1-104-664-11	ELECT	47MF	20%	25V	
C1701	1-126-935-11	ELECT	470MF	20%	16V	
C1702	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1703	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C1704	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C1705	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C1709	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C1723	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1724	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1801	1-124-903-11	ELECT	1MF	20%	50V	

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1802	1-126-964-11	ELECT	10MF	20%	50V	
C1803	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1805	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1806	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
C1807	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1808	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1809	1-126-940-11	ELECT	330MF	20%	16V	
C1810	1-126-940-11	ELECT	330MF	20%	16V	
C1811	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1812	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1813	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V	
C1814	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1816	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1817	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1818	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1819	1-124-903-11	ELECT	1MF	20%	50V	
C1820	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C1821	1-124-902-00	ELECT	0.47MF	20%	50V	
C1822	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
C1823	1-124-903-11	ELECT	1MF	20%	50V	
C1824	1-124-903-11	ELECT	1MF	20%	50V	
C1825	1-126-967-11	ELECT	47MF	20%	50V	
C1826	1-126-967-11	ELECT	47MF	20%	50V	
C1827	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1828	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1829	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1830	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1831	1-126-940-11	ELECT	330MF	20%	16V	
C1832	1-126-940-11	ELECT	330MF	20%	16V	
C1833	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1834	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1835	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1836	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1837	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V	
C1838	1-124-122-11	ELECT	100MF	20%	50V	
C1839	1-124-122-11	ELECT	100MF	20%	50V	
C1840	1-124-903-11	ELECT	1MF	20%	50V	
C1841	1-126-967-11	ELECT	47MF	20%	50V	
C1842	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1843	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C1844	1-126-967-11	ELECT	47MF	20%	50V	
C1845	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1846	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1847	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1848	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1849	1-124-122-11	ELECT	100MF	20%	50V	
C1850	1-124-122-11	ELECT	100MF	20%	50V	
C1851	1-137-399-11	FILM	0.1MF	5%	50V	
C1852	1-124-122-11	ELECT	100MF	20%	50V	
C1853	1-137-378-11	FILM	0.22MF	5%	50V	
C1854	1-124-927-11	ELECT	4.7MF	20%	50V	
C1855	1-124-903-11	ELECT	1MF	20%	50V	
C1856	1-104-665-11	ELECT	100MF	20%	25V	
C1857	1-124-122-11	ELECT	100MF	20%	50V	
C1858	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1859	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1860	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C1861	1-124-122-11	ELECT	100MF	20%	50V	
C1862	1-124-903-11	ELECT	1MF	20%	50V	
C1863	1-136-173-00	FILM	0.47MF	5%	50V	
C1864	1-124-903-11	ELECT	1MF	20%	50V	
C1865	1-124-903-11	ELECT	1MF	20%	50V	
C1866	1-126-967-11	ELECT	47MF	20%	50V	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<CONDUCTOR CHIP>	
CJ1	1-216-295-00	CONDUCTOR, CHIP	
CJ2	1-216-295-00	CONDUCTOR, CHIP	
CJ3	1-216-295-00	CONDUCTOR, CHIP	
CJ4	1-216-295-00	CONDUCTOR, CHIP	
CJ5	1-216-295-00	CONDUCTOR, CHIP	
CJ6	1-216-295-00	CONDUCTOR, CHIP	
CJ7	1-216-295-00	CONDUCTOR, CHIP	
CJ8	1-216-295-00	CONDUCTOR, CHIP	
CJ9	1-216-295-00	CONDUCTOR, CHIP	
CJ10	1-216-295-00	CONDUCTOR, CHIP	
CJ11	1-216-295-00	CONDUCTOR, CHIP	
CJ12	1-216-295-00	CONDUCTOR, CHIP	
CJ13	1-216-295-00	CONDUCTOR, CHIP	
CJ16	1-216-295-00	CONDUCTOR, CHIP	
CJ17	1-216-295-00	CONDUCTOR, CHIP	
CJ18	1-216-295-00	CONDUCTOR, CHIP	
CJ19	1-216-295-00	CONDUCTOR, CHIP	
CJ20	1-216-295-00	CONDUCTOR, CHIP	
CJ21	1-216-295-00	CONDUCTOR, CHIP	
CJ22	1-216-295-00	CONDUCTOR, CHIP	
CJ23	1-216-295-00	CONDUCTOR, CHIP	
CJ24	1-216-295-00	CONDUCTOR, CHIP	
CJ25	1-216-295-00	CONDUCTOR, CHIP	
CJ26	1-216-295-00	CONDUCTOR, CHIP	
CJ27	1-216-295-00	CONDUCTOR, CHIP	
CJ28	1-216-295-00	CONDUCTOR, CHIP	
CJ29	1-216-295-00	CONDUCTOR, CHIP	
CJ30	1-216-295-00	CONDUCTOR, CHIP	
CJ31	1-216-295-00	CONDUCTOR, CHIP	
CJ34	1-216-295-00	CONDUCTOR, CHIP	
CJ35	1-216-295-00	CONDUCTOR, CHIP	
CJ36	1-216-295-00	CONDUCTOR, CHIP	
CJ37	1-216-295-00	CONDUCTOR, CHIP	
CJ38	1-216-295-00	CONDUCTOR, CHIP	
CJ39	1-216-295-00	CONDUCTOR, CHIP	
CJ42	1-216-295-00	CONDUCTOR, CHIP	
CJ43	1-216-295-00	CONDUCTOR, CHIP	
CJ44	1-216-295-00	CONDUCTOR, CHIP	
CJ45	1-216-295-00	CONDUCTOR, CHIP	
CJ46	1-216-295-00	CONDUCTOR, CHIP	
CJ47	1-216-295-00	CONDUCTOR, CHIP	
CJ48	1-216-295-00	CONDUCTOR, CHIP	
CJ50	1-216-295-00	CONDUCTOR, CHIP	
CJ51	1-216-295-00	CONDUCTOR, CHIP	
CJ53	1-216-295-00	CONDUCTOR, CHIP	
CJ54	1-216-295-00	CONDUCTOR, CHIP	
CJ55	1-216-295-00	CONDUCTOR, CHIP	
CJ57	1-216-295-00	CONDUCTOR, CHIP	
CJ58	1-216-295-00	CONDUCTOR, CHIP	
CJ59	1-216-295-00	CONDUCTOR, CHIP	
CJ60	1-216-295-00	CONDUCTOR, CHIP	
CJ62	1-216-295-00	CONDUCTOR, CHIP	
CJ63	1-216-295-00	CONDUCTOR, CHIP	
		<CONNECTOR>	
CN1509*	1-564-506-11	PLUG, CONNECTOR 3P	
CN1513*	1-564-506-11	PLUG, CONNECTOR 3P	
CN1612*	1-564-507-11	PLUG, CONNECTOR 4P	
CN1642*	1-564-507-11	PLUG, CONNECTOR 4P	
CN1672*	1-564-507-11	PLUG, CONNECTOR 4P	
CN1716*	1-564-507-11	PLUG, CONNECTOR 4P	
CN1756*	1-564-508-11	PLUG, CONNECTOR 5P	
CN1757*	1-564-516-11	PLUG, CONNECTOR 13P	
		<DIODE>	
D1501	8-719-908-03	DIODE GP08D	
D1502	8-719-109-89	DIODE RD5.6ESB2	
D1503	8-719-908-03	DIODE GP08D	
D1505	8-719-109-88	DIODE RD5.6ESB1	
D1551	8-719-109-72	DIODE RD3.9ESB2	
D1552	8-719-911-19	DIODE 1SS119-25	
D1553	8-719-911-19	DIODE 1SS119-25	
D1601	8-719-908-03	DIODE GP08D	
D1602	8-719-908-03	DIODE GP08D	
D1603	8-719-908-03	DIODE GP08D	
D1604	8-719-908-03	DIODE GP08D	
D1803	8-719-911-19	DIODE 1SS119-25	
D1812	8-719-911-19	DIODE 1SS119-25	
D1814	8-719-911-19	DIODE 1SS119-25	
D1825	8-719-911-19	DIODE 1SS119-25	
D1826	8-719-911-19	DIODE 1SS119-25	
D1827	8-719-109-68	DIODE RD3.6ESB1	
D1931	8-719-110-60	DIODE RD24ESB	
D1932	8-719-110-60	DIODE RD24ESB	
D1934	8-719-110-60	DIODE RD24ESB	
D1935	8-719-110-60	DIODE RD24ESB	
D1936	8-719-110-60	DIODE RD24ESB	
D1937	8-719-110-60	DIODE RD24ESB	
D1942	8-719-110-60	DIODE RD24ESB	
D1945	8-719-110-60	DIODE RD24ESB	
D1946	8-719-110-60	DIODE RD24ESB	
D1947	8-719-110-60	DIODE RD24ESB	
D1948	8-719-110-36	DIODE RD13ESB2	
D1949	8-719-110-60	DIODE RD24ESB	
D1951	8-719-110-36	DIODE RD13ESB2	
D1953	8-719-110-36	DIODE RD13ESB2	
D1954	8-719-110-36	DIODE RD13ESB2	
		<FUSE>	
F1601⚠	1-532-745-11	FUSE, GLASS TUBE (3.15A/125V)	
	1-533-223-11	HOLDER, FUSE; F1601	
F1602⚠	1-532-745-11	FUSE, GLASS TUBE (3.15A/125V)	
	1-533-223-11	HOLDER, FUSE; F1602	
		<IC>	
IC1501	8-759-192-71	IC STV9379	
IC1601	8-749-010-88	IC STK392-010	
IC1602	8-749-010-88	IC STK392-010	
IC1701	8-752-861-57	IC CXP85112B-613S	
IC1702	8-759-041-54	IC MN1382S	
IC1801	8-759-327-52	IC PM0002B	
IC1802	8-759-327-51	IC PA0053B	
IC1803	8-759-012-67	IC MC7905CT	
IC1804	8-759-231-53	IC TA7805S	
IC1805	8-759-327-52	IC PM0002B	
IC1806	8-759-327-51	IC PA0053B	
IC1807	8-759-929-65	IC LM7912CT	
IC1808	8-759-701-79	IC NJM7812FA	
IC1809	8-759-327-52	IC PM0002B	
IC1931	8-759-711-28	IC NJM2058D	
IC1932	8-759-711-28	IC NJM2058D	